ARCHITECTURAL RECORD

BUILDING TYPES STUD

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MAY 1955



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*American Concrete Institute, Committee 613, 1944 Report, Page 655
Bureau of Reclamation's current Concrete Manual, Page 130





BUILDERS

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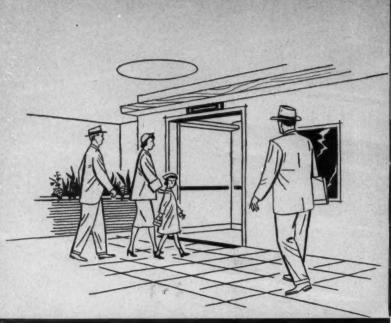


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Kirk Building-Dallas Architect: George L. Dahl



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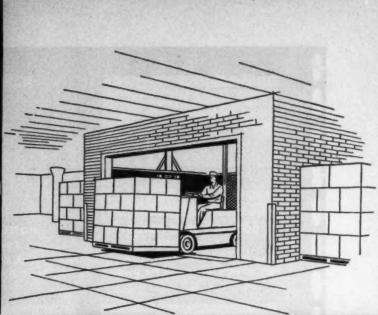
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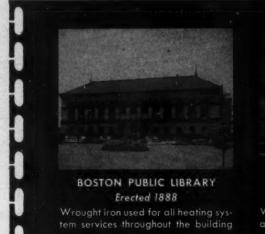




Atlantic Permanent Building & Loan Ass'n—Norfolk Architect and Builder: Bank Building & Equipment Corp. of America

Illinois Institute of Technology, Chemistry Bldg.—Chicago Architect: Mies van der Rohe. Assoc. Architects and Engineers: Friedman, Alschuler & Since









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ARCHITECTURAL RECORD

May 1955 Vol. 117 No. 5

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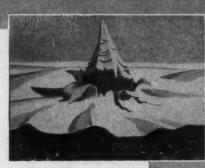
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ARCHITECTURAL RECORD MAY 1955

THE RECORD REPORTS

PERSPECTIVES

THE REAL LOWDOWN: according to a piece in the British magazine Building Materials Digest, architect Edward Mills reported at a recent "colloquium" at the Building Centre in London that "American architects are seriously considering abandoning the use of curtain walls because they are scared of the problems which have arisen." (Don't turn the page.)

Public relations note: architecture was ranked below medicine, law, education, banking and journalism among "prestige" occupations in a recent poll of 25 high school editors in the New York metropolitan area. The architect outranked the accountant, the salesman and the secretary in the students' social scale.

WHITHER THE ENGINEERS? Location of their new headquarters has been a matter of lively interest ever since it was announced they had outgrown their home of more than 50 years in the Engineering Societies Building at 33 West 39th Street in New York. Bidding has been spirited among leading U. S. cities, which know a Cultural Benefit when they see one; and Philadelphia, Pittsburgh and Chicago, so far the leading contenders, have each thought this one was worth \$1,500,000. But New York itself, having dragged its feet for long enough to see the color of the opposition's money, last month brought up the big guns. First, at a luncheon at New York's University Club, former President Herbert Hoover asserted the engineers ought to stay in New York, "for their own good and the good of the city." Then a five-man committee was named to select a New York site for a new headquarters and "arrange for financing construction"; and William Zeckendorf himself was appointed chairman. After a more or less discreet interval (six days), New York State Attorney General Jacob K. Javits advised New York City's Commissioner of Commerce and Public Events that the state would oppose the societies' plans to move elsewhere on the ground that special state legislation incorporating them as "United Engineering Trustees Inc." provided the corporation will "perpetually maintain its headquarters" in New York. Whither?

IN PORTLAND, Paul Thiry of Seattle urged Oregon A.I.A. members at their annual banquet not to "underestimate the function of that intangible thing called beauty." Form follows function, yes; but "beauty is a functional necessity. . . . I would like to dissipate the notion that it is something apart. Architecturally speaking beauty can be many things ... a dancing shadow of a tree branch on a wall, maybe a stream of sunlight, a curve, a contrast of surfaces, a texture, perhaps a reflection in the water. Sometimes it is achieved by a fresco or a mosaic. Somehow beauty is not something acquired but it is inbred . . . it is woven into the fabric of a building . . . it is not divisible. . . . Proportion and form and line are not something we prescribe . . . they too are the result of design . . . they too must be inbred factors . . . not struggled for, but easy and concise and not compromising in that they steal from the practical, but rather that they complement the practical." And the end of it all: "Primarily it is the architect's mission to understand the life of the people he serves and to weave into his structures the framework for living. The complexities of their enterprises should find simple direction through his rational thinking."

IN MILWAUKEE, it should be noted, Frank Lloyd Wright told the Wisconsin Architects Association that "America is going to have an architecture, the greatest the world has ever known, to which Rome's will not compare." Mr. Wright also

warned against "importing style from abroad," viewing architecture as a business, striving for quantity instead of quality and blind reliance on the form-follows-function formula. "Architecture is an expression of human beings for human beings. You can see painting, you can hear music. No word is sufficient to describe architecture. Literature tells about man. Architecture presents him. There must be a soul in architecture - art and religion go hand in hand. We must have something to go with the Declaration of Independence. We need the spirit of our forefathers to inspire our young."

AND IN DETROIT, Minoru Yamasaki shared some of his architectural thinking with the Michigan Society of Architects at their annual convention — against the background of his recent travels in Italy, India and Japan, "experiencing for the first time their wonderful architectures of the past." Discussing overemphasis on function among other "fallacies" he listed as "growing pains" of today's architecture, Mr. Yamasaki observed that "if we stop at function and function only, we have not even commenced with architecture. We must," he declared, "work for the uplift, the emotional quality of architecture which is man's physical expression of his nobility. If we could attain this quality in every building, in every walk of life, no matter to how small a degree, then we would have achieved with the tools of our architecture the kind of environment that we so desperately need as a framework for our civilization." In spite of the fallacies, Mr. Yamasaki believes, "the state of architecture is wonderful. In our dreams of the future are buildings which will be symbolic of the democracy in which we so deeply believe. The enjoyment of buildings, the designs, will be enhanced by our never-resting search for beauty . . . "

THE RECORD REPORTS BUILDINGS IN THE NEWS

CHICAGO

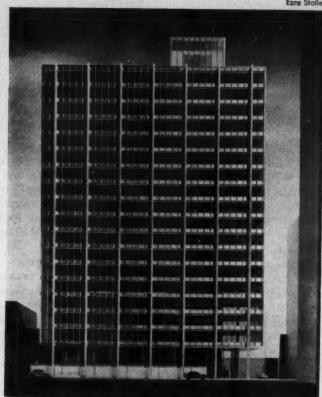
Ezra Stoller



ALUMINUM AND GLASS—Two more lakefront apartment projects by Ludwig Mies van der Rohe (Friedman, Alschuler and Sincere associated) for Chicago builders and developers Herbert S. Greenwald and Samuel N. Katzin: above, "900 Esplanade Apartments" (to be immediately adjacent to Mies' 860–830 Lake Shore Towers); below, "Commonwealth Promenade Apartments." Structure will be flat-slab, reinforced concrete; exteriors a series of prefabricated aluminum frames nine by 21 ft, designed to eliminate as many construction joints as possible. Frank J. Kornacker is the structural engineer. Estimated cost: \$25 million

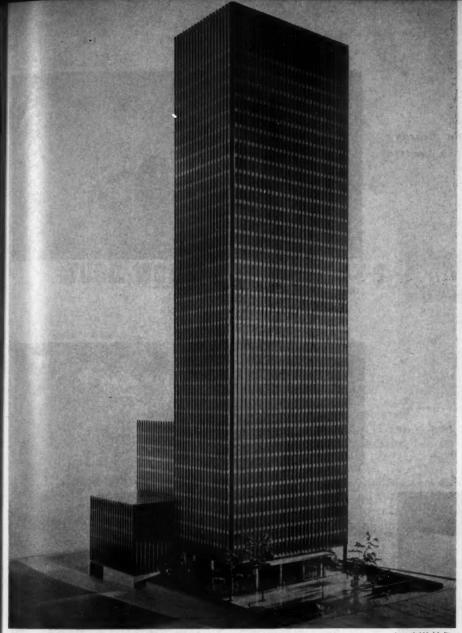


Hedrich-Blessin



STEEL AND GLASS—Skidmore, Owings and Merrill are architects for 19-story, 250 ft \$6 million office building projected by Inland Steel Company for northeast corner of Dearborn and Monroe streets. It will be Loop's first large new office building in 20 years and the city's first all stainless steel building. Use of exterior steel columns for structural support and a separate service shaft (310 ft high) for all risers as well as utilities will leave the main office tower unobstructed interior floor areas 177 by 58 ft, said to be the widest clear span of floor space ever designed for a multi-story building. Construction is scheduled to start this fall





Joseph W. Molitor

BRONZE AND GLASS—The design by Ludwig Mies van der Rohe and Philip Johnson (Kahn and Jacobs, Associated Architects) for "Seagram Park Avenue" projects a 38-story skyscraper with a façade entirely of bronze and dark-gray glass, set on a marble platform which will constitute a large open plaza at ground-floor level. The new headquarters of Joseph E. Seagram & Sons Inc., on the east side of Park Avenue between 52nd and 53rd streets, is scheduled for completion in 1957, when Seagram's will celebrate its 100th anniversary. Estimated cost: "in excess of" \$20 million. Structural engineers: Severud-Elstad-Krueger. Builder: George A. Fuller



NORTH CAROLINA Chapter of the American Institute of Architects held its first honor awards program as a feature of its annual winter meeting at Chapel Hill this year (AR, Mar. 1955, page 15). A jury consisting of Richard L. Aeck, A.I.A., Atlanta, Thomas H. Creighton, A.I.A., editor of Progressive Architecture, and Dean Olindo Grossi of the Pratt Institute School of Architecture, named 14 projects (of 52 submitted by 21 North Carolina firms) to receive honor awards, and designated nine of the 14 for "special commendation." The nine are shown on this and next page

Joseph W. Molitor



Student Union Building, North Carolina State College, Raleigh; William Henley Deitrick—John C. Knight, Architects

Joseph W. Molitor



Office building for First Federal Savings and Loan Association of Catawba County, Conover; Clemmer & Horton, Architects

Joseph W. Molitor



Office Building for Addison Building Corp., Charlotte; A. G. Odell Jr., Architect (Continued on page 12)

THE RECORD REPORTS BUILDINGS IN THE NEWS

North Carolina Awards
(Continued from page 11)



Farm Colony Building, State Hospital, Morganton; John Erwin Ramsay, Architect

Joseph W. Molitor



Double Oaks Elementary School, Charlotte Public School System; A. G. Odell, Jr., Architect

Joseph W. Molitor



David G. Jones Elementary School, Greensboro Public School System; Loewenstein-Atkinson, Architects



Residence for Mr. and Mrs. J. Spencer Bell, Charlotte; A. G. Odell Jr., Architect

Joseph W. Molito



Residence for Mr. and Mrs. Wilbur Carter Jr., Greensboro; Loewenstein-Atkinson, Architects

G. E. Kidder-Smith



"The Little Chapel on the Boardwalk," Wrightsville Beach; Leslie N. Boney, Architect

(More news on page 15)

WOOD WON'T ROT WHEN IT'S

iving fungi, which break down the substance of wood are microscopic and abundant. But they need WARMTH and DAMPNESS to develop. Dampness will also peel off paint, crumble plaster, cause iron and steel to rust.

Some insulations can promote and retain destructive condensation inside walls and other structural spaces. Warmth and vapor can flow through asphalt, paper, plaster and most building materials, including ordinary insulations. Vapor condenses when, upon striking a colder surface, the air reaches a dew-point.

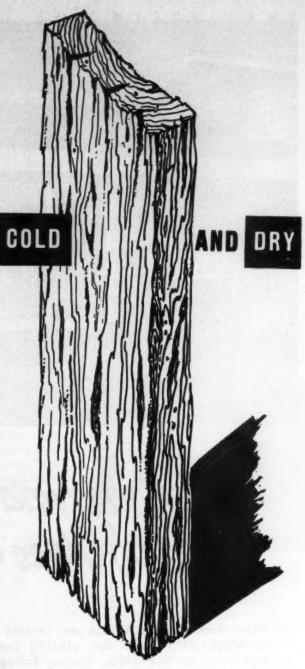
An empty space, the best insulator against heat flow by Conduction, does not prevent heat flow by Radiation and Convection. Of all heat transferred through structural spaces, about 50% to 80% is by Radiation; all but about 7% of the rest is Convection. The surfaces of multiple accordion aluminum sheets have a reflectivity for heat rays of 97%; absorptivity and emissivity of only 3%. The aluminum and fiber layers retard Convection. Conduction is slight through the preponderant low density air spaces.

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Where multiple accordion aluminum is used, fortuitous vapor and water (for instance rain) which intrude into wall and similar spaces will gradually flow out as vapor through exterior walls and roofs as pressure develops within, because vapor flows from areas of greater to less density. The vapor cannot back up through the continuous, almost completely impervious aluminum, so it flows out because exterior walls and roofs have substantial permeability in comparison to aluminum, far greater than the required 5 to 1 ratio.

To obtain maximum uniform depth protection against heat loss and condensation formation, it is necessary to use edge-to-edge multiple aluminum, each sheet of which automatically stretches from joist to joist, and also all through the flanges for further vapor protection as well as permanent attachment of each sheet.

The U.S. NATIONAL BUREAU OF STANDARDS brochure: "Moisture Condensation in Building Walls," discusses vapor and heat flow, and the causes and prevention of condensation. Use the coupon. Get a copy at our expense.



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The State of Construction

BOOM, BOOM, BOOM is the continuing theme, and for whatever the economic pundits can make of it, the construction industry goes on setting new all-time records. The latest F. W. Dodge Corporation report shows first quarter 1955 construction 40 per cent over the previous all-time-high first quarter in 1954 (for details, see page 382). At its annual meeting in Washington at the end of March, the regional directors of the American Institute of Architects reported more work in architects' offices at that time than a year ago in eleven of the Institute's 12 geographic regions; the twelfth - the Great Lakes area maintaining last year's high level. And the Associated General Contractors of America reported at its annual convention in New Orleans (see next page) that a telegraphic survey of their members revealed a large majority anticipated increases in all three major categories of construction - building, highway and heavy engineering - over the next six months.

A.I.A. News and Notes

FIVE HONOR AWARDS and 22 Awards of Merit will be given in the 1955 A.I.A. Honor Awards Program. Selections were made last month in Washington - in advance of the annual convention for the first time - by a jury consisting of

Thomas H. Locraft, Washington, D. C., chairman; Ludwig Mies van der Rohe, Chicago; Eugene F. Kennedy, Jr., Boston; J. Byers Hays, Cleveland; and Ernest Born, San Francisco. First Honor Awards: The General Telephone Company of the Southwest, San Angelo, Tex. Pace Associates, architects, with Charles B. Genther, arthitect in charge; Central Restaurant Building, General Motors Technical Center, Warren, Mich. - Eero Saarinen and Associates, architects; Women's Dormitories and Dining Hall, Drake University, Des Moines, Iowa - Eero Saarinen and Associates, architects; American Embassy, Stockholm - Ralph Rapson and John van der Meulen, architects; North Hillsborough Elementary School, Hillsborough, Cal. - Ernest J. Kump, architect. Awards of Merit were made to: St. Brigid Catholic Church, Los Angeles Chaix and Johnson, architects; Texas Children's Hospital, Houston, Tex. Milton Fay Martin, architect; Eagle Rock Playground Clubhouse, Eagle Rock, Cal. - Richard J. Neutra, architect, and Dion Neutra, associate; Men's Residence Hall, University of Washington, Seattle - Young, Richardson, Carleton and Detlie, architects; Bank of Apple Valley, Apple Valley, Cal. -McFarland, Bonsall, Thomas, architects; Danforth Chapel, Colorado A&M College, Fort Collins, Colo. - James M.

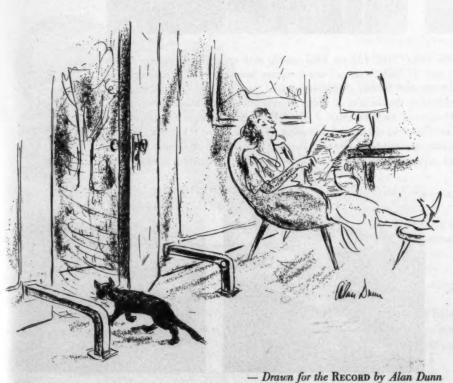


Happy humorist: architect Roger Allen of Grand Rapids addressing Michigan architects' banquet. Below: A.I.A. President Clair W. Ditchy, who received the Michigan society's 1955 Gold Medal, with Elmer J. Manson, society president



Hunter, architect; O'Neil Sheffield Shop-

ping Center, Sheffield Township, Ohio Weinberg and Teare, architects; Charles M. Goodman residence, Alexandria, Va. - Charles M. Goodman, architect; U. S. Naval Postgraduate School, Monterrey, Cal. - Skidmore, Owings and Merrill, architects; U. S. Navy Service Schools, Great Lakes, Ill. - Skidmore, Owings and Merrill, architects; Bandstand and Park Pavilion, St. Petersburg, Fla. - William A. Harvard, architect; Home Economics Building, University of California, Davis Campus Hervey Parke Clarke and John F. Beuttler, architects; George Channing residence, Sausalito, Cal. - Roger Lee, architect; St. Matthews Church, Pacific Palisades, Cal. - A. Quincy Jones and Frederick E. Emmons, architects; Children's Clinic, Raceland, La. - Curtis and Davis, architects; Sigmund Kunstadter house, Highland Park, Ill. -George Fred Keck and William Keck, architects; apartment development, Fairfax County, Va. - Keyes, Smith, Satterlee and Lethbridge, architects; Manresa Jesuit Retreat House, Azusa, (Continued on page 16)



(Continued from page 15)

Cal. — Wallace Neff, architect; Ernest Nelson Moore house, Carmel, Cal. — Anshen and Allen, architects; five-unit apartment building, Los Angeles — Carl Maston, architect; the William H. and May D. Taylor Memorial Library and the John M. Reeves Student Union Building, Centenary Junior College, Hackettstown, N. J. — Jan Hird Pokorny, architect; and the Mercantile Library, Philadelphia — Martin, Stewart and Noble, architects.

CLARENCE STEIN will be the banquet speaker at the 87th annual convention in Minneapolis June 20–24. The choice of one of this country's pioneer city planners is in key with the convention's theme, "Designing for the Community," and Mr. Stein's address will highlight a program of seminars on such subjects as

"Rebuilding the City" (Cities Are Planning Conscious Review of Redevelopment Accomplishment, Training the Architect for Planning, Design Objectives in Planning, Urban Design and Housing) and "The Architecture of Community Expansion" (Planning Needs the Architect, Development Housing — Neglected Architectural Opportunity, Planning of Smaller Communities, Commercial Service to New Areas).

Michigan Architects Meet

HIGHLIGHTED BY AN ADDRESS "Where Do We Go from Here?" by Minoru Yamasaki (see page 9), the 41st annual convention of the Michigan Society of Architects was held at the Hotel Statler in Detroit March 9-11. At the Michigan Building Industry Banquet, traditional

closing event of the Society's conventions, A.I.A. President Clair W. Ditchy, F.A.İ.A., received the Society's Gold Medal for 1955.

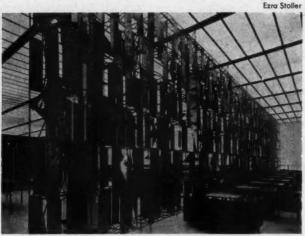
Another notable event of the convention was the first public showing of the Society's new 16-mm color sound movie made as part of the Society's very lively and effective public relations program to dramatize the architect and his work for public consumption. The Society plans to make prints available to A.I.A. chapters for a nominal fee.

Prosperity and Competition

THE COUNTRY'S GENERAL CONTRACTORS, some 1800 of them, met in New Orleans this spring in an atmosphere of continuing prosperity. Talk of continuing tight competition in bidding for the big jobs while markets remain strong highlighted

(Continued on page 314)





ARCHITECTURAL LEAGUE OF NEW YORK GOLD MEDALS for 1955 went to these entries in the League's 58th annual exhibition of architecture and the allied arts. 1. Manufacturers Trust Company branch bank, Fifth Avenue and Forty-third Street, New York City, Skidmore, Owings and Merrill, Architects, received the Gold Medal for Architecture. There were no Silver Medals or Honorable Mentions in architecture. 2. Harry Bertoia's sculptural metal screen, in the same bank, was awarded the Gold Medal in Design and Craftsmanship. 3. Gold Medal for Sculpture was awarded to Ernest Morenon for his Stations of the Cross in the Church of the Blessed Sacrament, Holyoke, Mass. (Chester F. Wright, architect). 4. Pier 57 (Grace Line), New York City, won the Gold Medal in Engineering for E. H. Praeger of Madigan Hyland. Rendering shows concrete boxes which support the superstructure, provide unique underwater storage areas







(More news on page 20)

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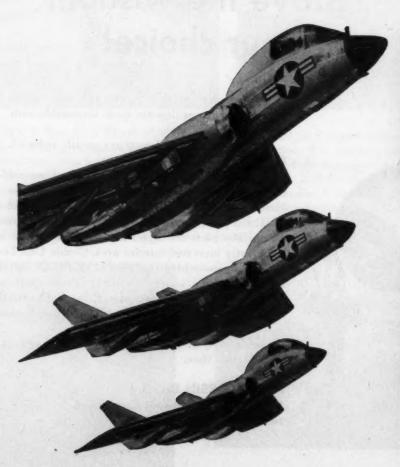
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Chance Vought uses air conditioning by





Chance Vought, maker of the famous Corsair, is now in full production of delicately machined guided missile Regulus (above) and twin-jet Cutlass (left).

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engii



American Blower H&V Units circulate conditioned air in hangars; 21 of these units in missile hangar provide complete change of air every 12 minutes.





Five American Blower Supply Fans and a Sprayed Coil Dehumidifier furnish conditioned air for offices, test laboratory in upper floors of missile hangar.

Chance Vought (foreground) and adjoining plants are leased from the U.S. Navy. Entire air-conditioning installation contains 7400 tons of refrigeration—of which no less than 6600 tons are applied to the load through American Blower equipment.

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THE RECORD REPORTS

THREE FIRMS ARE CITED IN WISCONSIN BIENNIAL

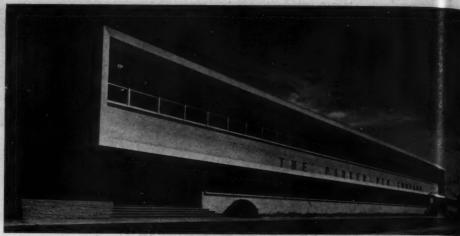
THREE FIRMS WON FIVE AWARDS in the 1955 Biennial Honor Awards Competition sponsored by the Wisconsin Architects Association. All of the premiated buildings are shown on this page.

There were 44 entries in the competition, which is held every two years "to encourage the appreciation of excellence in architecture and to afford recognition of exceptional merit in recently-completed buildings which are the product of Wisconsin members of the American Institute of Architects." Entries are judged, not in competition with each other, but "on the basis of the excellence of the architect's solution of the problem presented him by the owner's requirements, site conditions, cost limitations and other limiting factors."

The wimners and other entries are to be exhibited throughout the state.

Members of the jury were: Carl Koch, A.I.A., of Cambridge, Mass.; Harold Spitznagel, A.I.A., of Sioux Falls, S. D.; and John W. Root, F.A.I.A., of Chicago.

Mark T. Purcell of Madison was chairman of the committee which arranged the competition. Members were Frederick J. Schweitzer of Milwaukee and Maurey Lee Allen of Appleton, vice chairmen; Wallace R. Lee Jr., Robert J. Van Lanen and Austin A. Fraser, all of Milwaukee; Thomas H. Flad of Madison; and Theodore H. Irion of Oshkosh.

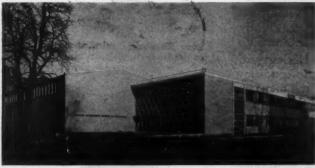


William Wal

FIRST HONOR AWARDS—"for distinguished accomplishment in architecture"—went to two buildings by John J. Flad and Associates of Madison: above, industrial plant for Parker Pen Company, Janesville, Wisc.; below, Middleton (Wisc.) State Graded School. The jury, choosing to give two first awards instead of the one the program called for, commended the Parker plant especially for its "straightforward plan" and "well-integrated exteriors"; the school for "interesting fenestration and human scale"







AWARDS OF MERIT IN ARCHITECTURE -

- 1. Jewish Community Center, Milwaukee; Maynard W. Meyer & Associates, Milwaukee, architects. Jury praised "ingenious solution" of difficult site problem
- 2. Residence of Mr. and Mrs. William Metzker, Mequen, Wisc.; Maynard W. Meyer & Associates, architects. Jury called house "a good low-cost solution to the residential problem"
- 3. Public Library Branch, Milwaukee, Wisc.; Grassold, Johnson & Associates, architects. Jury liked use of garden as part of plan, commended "strategic location" of control desk



2.



(More news on page 24)







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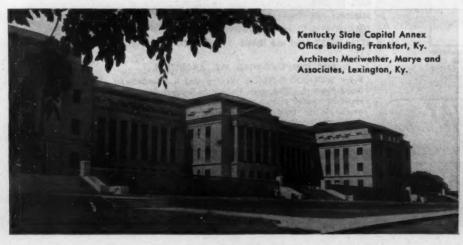
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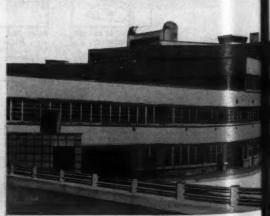
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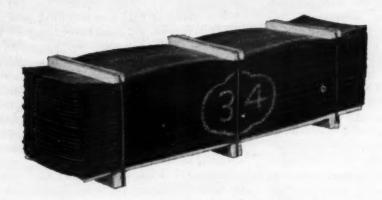




architectural news

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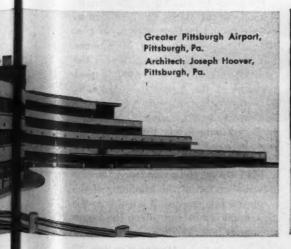
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FHA'S NEW ARCHITECTURAL ADVISORY GROUP STUDIES MPR'S PARAGRAPH BY PARAGRAPH

THE PROMISED REVISION of Federal Housing Administration minimum property requirements to make possible "a more livable house that in the long run will cost less money" is expected to step up in tempo terrifically in the near future. FHA Commissioner Norman P. Mason's first major move toward this objective was the appointment last fall of Boston architect Neil A. Connor to be the new head of FHA's architectural standards division (AR, Oct. 1954, pp. 38 et seq.). Now he has named a sevenman "architectural advisory committee" (it includes engineers) which will undertake a paragraph-by-paragraph study of the FHA Handbook of Minimum Property Requirements as one of its major projects. The committee, holding a twoday meeting in Washington every two months, is estimated to need about a year to get through the entire handbook.

Members of the committee are: Edward H. Fickett, Los Angeles architect specializing in small house design; Harold D. Hauf, architect and engineer. former editor-in-chief of ARCHITECTURAL Record, a top Navy construction specialist and now head of the Department of Architecture at Rensselaer Polytechnic Institute, Troy, N. Y.; Leonard G. Haeger, architect, former director of the National Association of Home Builders' Research Institute and now affiliated with big home builder William Levitt; Irwin G. Jalonack, consulting engineer, of Old Westbury, L. I., N. Y.; James T. Lendrum, director of the University of Illinois Small Homes Council; David C. Slipher, former technical director for the Fritz Burns homebuilding organization, Los Angeles, and now field director for ACTION, the American Council to Improve Our Neighborhoods; and Harold P. Vermilya, now vice president of American Houses Inc., New York City.

Commissioner Mason noted that all members of the group are concerned with the house as a completed unit, not with any particular component.

The committee will hold its second bimonthly meeting late this month, and no new MPR revisions will be issued before that time. A preliminary organization meeting in New York early this year enabled the group to get down to serious work when it convened its first formal session in Washington March 17 and 18.

All problems of FHA's architectural standards division will come before the committee as the bimonthly meetings continue, but none will have more importance to architects than those dealing with material acceptance. Minutes of the first meeting were written and distributed to members of the group. Replies are being checked and recommendations will be acted upon quickly, according to Mr. Connor.

Subjects for discussion in addition to the item-by-item revision of the handbook are being selected from among questions most frequently raised in correspondence or personal visits from architects and builders. Topics currently under consideration by the committee include the following:

- Thermal insulation.
- Sills and plates.
- Sill and plate anchoring.
- Questions of privacy in planning.
 These were said to involve "unconventional" plans as in contemporary house design.
 - Gutters and downspouts.
 - Concrete composition.
 - Corner bracing.
 - Setting nails in exterior wood trim.
 - Acceptable thickness of plaster.
 - Carpeting as finished floor.
- Bituminous fiber and cement asbestos sewer pipe failures.
- Guarantee for hot water heaters.
- Weight and thickness of coating on heating and air conditioning ducts.

Besides these specific items, there were a number of more general questions discussed by the committee in its initial session.

Restrictive changes decided upon necessarily will take longer to effect than the non-restrictive MPR revisions, but all will be handled with dispatch, Mr. Connor promised.

Mr. Mason emphasized that the panel was appointed for the primary purpose of developing quality houses at low cost. "The willingness of this group to con-

sult with FHA and to make available to us the fruits of their experience and knowledge will contribute immeasurably to the advance of the quality concept in building better values into today's homes," Mr. Mason declared. Membership was selected to represent both the "academic" and the "practical" phases of architectural and engineering design, he said.

Another important part of the FHA drive to update minimum property requirements is the new move toward cooperation with the Building Research Advisory Board. So far, FHA has contracted with BRAB for a study of one specific subject, slab-on-ground construction; but other contracts were being negotiated. All of the BRAB findings will be closely reviewed by the advisory committee and translated into MPR changes if this seems indicated.

The new FHA efforts follow a comparative lull in the issuance of MPR revisions — only four have been issued since last June. These dealt with kitchens, insulation labeling, composition of concrete, and heating requirements. The last-named is the most extensive of the recent series.

FHA also issues materials-use bulletins from time to time. These describe acceptability of materials and give detailed specifications. The three issued since March 1953 have covered concrete roofing tile; application of clay tile with adhesives on walls of gypsum plaster and gypsum wallboard and on wood or concrete floors; and asphalt strip shingles on low-pitched roofs.

FHA has made no recent changes in its requirements for individual water supply and sewage disposal systems.

Revisions resulting from the current "new look" at MPRs will be gotten to architects and builders as soon as possible after they are decided, Mr. Connor promises — for one reason, to gain the money-saving objective inherent in most revisions at the earliest possible date. If changes make the product application or process less restrictive, revisions can be issued immediately. Sixty to 90 days may be required to institute more restrictive revisions.

FHA always endeavors to get the new information out at the beginning of the "construction season" if possible so the new applications can affect the larger volume of homebuilding.

(More news on page 26)

Throughout one of the World's newest and most luxurious hotels

The Fontainebleau MIAMI BEACH, FLORIDA



SEATS



Olsonite model No. 56 Solid color seats were installed throughout the Fontainebleau Hotel.

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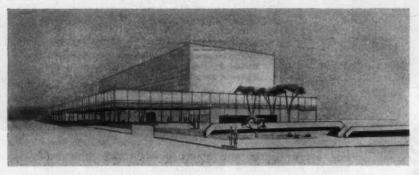
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NEWS FROM CANADA By John Caulfield Smith

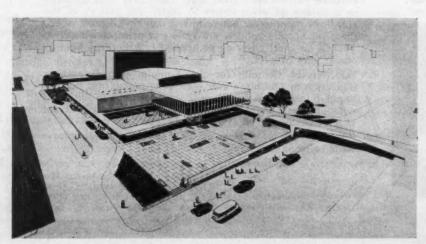
VANCOUVER CHOOSES A PLAN FOR ITS CIVIC AUDITORIUM



First Prize of \$5000, and the commission, went to architects R. T. Affleck, J. Michaud, G. Desbarats, H. Sise and D. F. Lebensold, all of Montreal



Second Prize, of \$2500, was awarded to the entry of Calgary architects J. Clayton and K. Bond



Third Prize, of \$1000, was awarded to the design submitted by architect J. Paivio of Calgary

AFTER SEVERAL FALSE STARTS over the past 40 years, Vancouver, it seems, is finally going to get its Civic Auditorium. The city plans to build the winning design in its recent competition, which was won by a group including architects R. T. Affleck, J. Michaud, G. Desbarats, H. Sise and D. F. Lebensold, of Montreal. The first prize is \$5000 and the commission fee.

The second prize, of \$2500, was awarded to J. Clayton and K. Bond of Calgary and the third prize of \$1000 went to J. Paivio, also of Calgary. Five honorable mentions, shown on this and the following page, were awarded \$200 each. The competition was open only to members of the Royal Architectural Institute of Canada.

The project, which will be built at a cost of \$2,750,000, will cover a city block in downtown Vancouver. The facilities required by the city include a principal hall for opera, ballet, drama, concerts, meetings and films (in that order of importance) to seat 2750–3000; broadcasting headquarters; a small hall seating 450–700; a restaurant with lounge; and two meeting rooms seating (Continued on page 30

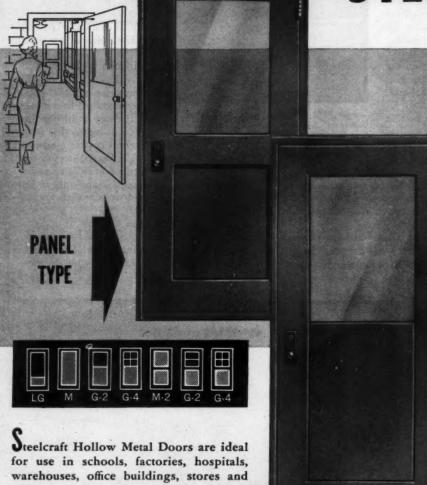


Above: First Mention (all mentions were awarded \$200) went to C. Owtram, Vancouver architect. Below: Second Mention was awarded to W. R. Ussner and J. C. Peeps of the University of British Columbia





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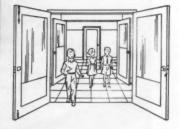
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Controls in the renovated Heinz service building auditorium help provide ideal Indoor Weather—no matter how large or small the gathering for an event.

pancy, exposure and use factors. More on these important factors will be found in the captions.

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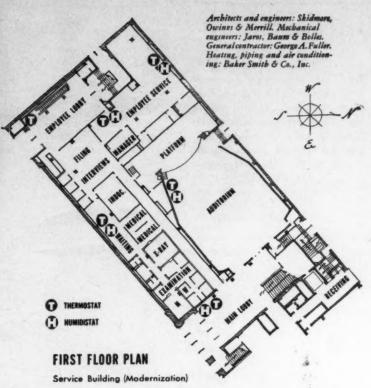




Occupancy. Separate thermostats in the cafeteria provide ideal comfort by calling for more heating or cooling—depending on the number of occupants. They also easily meet special comfort problems such as compensating for heat from steam tables. Separate thermostats, too, provide comfort in locker rooms where the internal cooling load may be raised by the influx of hundreds of people in a few minutes' time.

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I'm interested in learning more about Honeywell Customized
Temperature Control.

Name

Pirm Name

Address

City

Zone

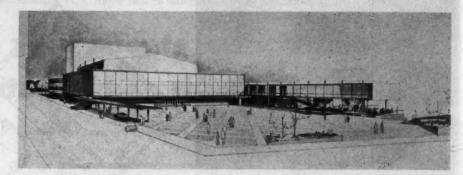
State

THE RECORD REPORTS

CANADA (Continued from page 26)

Vancouver Auditorium

Top: Third Mention was won by J. Semmens and D. C. Simpson, Vancouver architects. Center: Fourth Mention, by architects Green, Blankenstein, Russell & Associates, Winnipeg. Bottom: Fifth Mention, by architects J. _B. Parkin Associates, Toronto







exhaust eliminating fixtures



Yes, if you're looking for up-to-date efficiency in an exhaust elimination system you'll find there's nothing more modern on the market than Kent-Moore's J 5862 and J 2980-B Monoxivent Underfloor Systems. Both of these outstanding fixtures offer such important advantages as: minimum cost; maximum operating economy; underfloor hose storage; quick, convenient use and long life. What's more, the J 5862 "Twinstallation" services both single and dual exhaust cars! See your nearby Kent-Moore jobber for complete information on Monoxivent Systems. See him today!





5-105 General Motors Building . Detroit 2, Michigan





100-200 people. Site requirements include a landscaped forecourt and a smaller landscaped court on the opposite side; service areas and unloading and parking facilities.

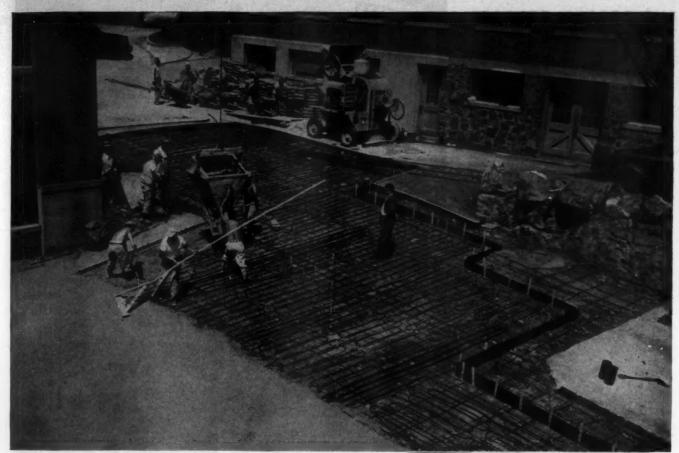
Fred Lasserre, M.R.A.I.C., director of the School of Architecture at the University of British Columbia, was professional adviser for the competition and chairman of the board of assessors. Other judges were G. Sutton-Brown, Director of Planning, City of Vancouver, and architect Eero Saarinen of Bloomfield Hills, Mich.

HOUSE BUILDERS URGED TOWARD BETTER DESIGN

The need for better residential design was stressed at the 12th annual convention of the National House Builders Association, held in Toronto March 27 through April 1.

The view held by a number of the speakers was that an increasingly competitive market focused attention on the contribution the architect was in a position to make. It was agreed that the idea of architect-builder teams, as they have developed in the United States, has very definite application in Canada.

(Continued on page 32)



Pouring concrete over Anaconda Pre-Formed Panel Grids, the basic units of this snow-melting system for the loading area of a New England manufacturing plant. Right, you see how effective the system is in operation. No snow, no ice, no trouble all winter. All done by simply turning a valve.

Snow-melting systems of copper tube installed faster and easier with **Anaconda Pre-Formed Panel Grids**



PG's are tied in a figure 8 bundle and packet

NACONDA Pre-Formed Panel Grids* -PG's -are time and labor savers for snow-melting systems. These standard size, factory-formed grids come to the job ready to position in place and connect in series to form circuits of design lengths. Time-consuming and costly fabrication of sinuous piping is no longer necessary.

PG's for snow-melting systems contain 50 feet of %" nominal (%" O.D.) Type L copper water tube and are machine-bent to provide 9" c-c spacing. Each PG forms a panel 55%" wide by 90" long, effectively serving a pavement area of approximately 45 square feet. Water containing an anti-freeze solution is heated by a separate boiler or heat exchanger and circulated through the system. By conduction, the surface of the pavement is warmed sufficiently to melt snow or prevent

PG'S FOR RADIANT PANEL HEATING

PG's were originally developed and are widely used for radiant panel heating systems. Easily and quickly installed in floors or ceilings, they contribute substantially to lower installation costs. For ceiling work, PG's are available in

Ltd., New Toronto, Ontario.

%" Type L copper tube formed on 6" c-c spacing. For complete information, write for a copy of Publication C-6, a new, 24-page illustrated booklet showing suggested layout and installation procedures. Address The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass

ANACONDA

PRE-FORMED COPPER TUBE PANEL GRIDS



THE RECORD REPORTS

CANADA

(Continued from page 30)

Hon. Robert H. Winters, Minister of Public Works, voiced the opinion that the quality of new houses is going to have a more important bearing than it has had in the past on the quantity of new houses built from year to year. There is no call to abandon the objective



CORALUX

ACOUSTICAL PLASTER

"Shushes" school moises

SOUNDPROOFS-FIREPROOFS-INSULATES





Specify CORALUX — the perlite accoustical plaster — whenever attractive, sound-abosrbent, fireproof surfaces are required for ceilings and upper walls! CORALUX is pre-mixed, smooth - working, non - setting, lightweight (only 9 oz. p.s.f., ½" thick) and non-combustible. Can be troweled or machine applied over old or new surfaces economically. Actually costs less than tiles with comparable acoustical control factors. Write for your file copy of our latest CORALUX Acoustical Plaster bulletin.

F. E. SCHUNDLER & CO., Inc.

JOLIET, ILLINOIS

Manufacturer of:

CORALUX PERLITE PRODUCTS

A VERMICULITE PRODUCTS

F. E. SCHUNDLER & CO., inc. DEPT. B-2
34 Railroad Street, Jelist, Illinois
Gentlemen:
Kindly send me latest technical and cost data on
CORALUN ACOUSTICAL PLASTER.
Name
Company
Address
City State

Municipal Health Headquarters Building in Hamilton, Ont., is constructed largely of precast concrete elements; building houses tuberculosis, prenatal and infant clinics and administrative offices, and was designed by City Architect S. M. Roscoe



of quantity, he said, but in order to achieve it, more emphasis must be placed on new ways and kinds of housing.

"We have been so concerned," Mr. Winters told the builders, "with the problems of meeting the increase in demand from year to year, that we have not had much time to devote to new ways of housing or renewal of deteriorating housing and slum clearance. Houses, like automobiles, become obsolete and should at the appropriate time either be replaced or turned in for new ones."

Earl W. Smith of El Cerrito, Cal., president of the National Association of Home Builders of the United States, and Walton Onslow of Washington, public relations counsel of the N.A.H.B., also addressed meetings.

The new president of the N.H.B.A. is Harry J. Long, Toronto merchant builder. Other officers include H. J. Ferguson, Victoria, B. C.—western vice president; W. M. McCance of Sarnia, Ont.—eastern vice president; and Frank L. Murray, Toronto—treasurer. The organization's executive vice president is John Caulfield Smith.

(Continued on page 36)



control.

Type D Ro



(a77)

OVER SIXTY YEARS



OF AUTOMATIC TEMPERATURE AND









OFFICES IN CHIEF CITIES



FLOWRITE Central Valve

Experience gained by Powers in all types of prominent buildings will be helpful to you. When problems of temperature and humidity arise, contact our nearest office.

THE POWERS REGULATOR COMPANY, Skokie, III.



Mitered frame with no exposed screws. Spring clip construction allows glass to float safely within its strong, resilient support.



Styrofoam insert at the lock location prevents the infiltration of moisture.



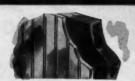
Alumilited aluminum louver assembly for optional use in resilient frame.



Vs" steel plate centered in dense honeycomb area provides solid support for surface hardware.



Aluminum skin is interlocked with solid aluminum stile for invisible skin-rail construction.



Attractive ribbed aluminum sheet laminated to hardboard backup sheet. Exceptionally high impact resistance is built-in.



For doors on floor closers, the concealed aluminum channel welded to pivot stile transmits reaction over the entire door area.

NEW TRIPLE-STRENGTH FLUSH DOOR

Sandwich with Honeycomb Core Formed on Hot Platen Press Built like a sandwich with a honeycomb core, the new Kawneer Flush Door is 10 times stronger than the obsolete girder type and will last many years longer than ordinary doors. It has a high strength/weight ratio with great resistance to flexure and impact making it ideal for heavy use such as in hospitals or offices. Surface of standard door is handsome, subtle-ribbed aluminum with alumilited finish to insure lasting beauty. Special surfaces in aluminum and plastic can be provided on special order.

- Economically priced. Competitive with top quality wood core or hollow metal.
- Built for rugged duty in high traffic areas.
- Practically impossible to dent under normal use.
- Easily cleaned, virtually no maintenance.
- Suitable for both interior and exterior use.
- Absolutely cannot peel apart.

Kawweelh

manufacturers of architectural metals, doors and entrances, and sun-control products, aircraft and appliance products.

Extremely Rigid Remarkably Moisture proof Passes Critical Tests

1,000,000 slam test

This new honeycomb door outperformed its girder-type competitor 10 to 1 in a slam test. This test specifies that the door be slammed repeatedly against a metal jumb until failure. The old-type door failed completely after 98,761 slams, whereas the new honeycomb core door was still plumb and true after 1,000,000 slams! It was needless to continue the test until failure. The test proves it will stand up many years in high traffic areas.



4 month saturated steam moisture test

Subjected to saturated steam day and night in a controlled chamber on one side for nearly 4 months and regular atmospheric conditions of late winter and early spring on the other side, this remarkable door survived without separation of laminations, warping or sagging. The new Kawneer door will withstand extremes in weather and still provide excellent service. The moisture resistance of this door makes it just as practical for exterior use as well as interior.



Freedom of design with Honeycomb



lain One-li

light On

One-light

Louver onl

Double door



Three ligh

Four light

Sp

pecial lights—shape and location

Because this new door is completely free of interior structural girders, there is a wide flexibility for positioning lights and louvers within the following limitations:

- 1. One light not to exceed $\frac{1}{3}$ of door area.
- 2. Two lights not to exceed 1/2 of door area.
- Special size lights not to be placed closer than
 to edge of stile or 6 from top to bottom.

BOTH STANDARD AND SPECIAL SIZES AVAILABLE ...

To provide complete flexibility the Kawneer honeycomb door is available in both standard and special sizes. The standard frames are extruded tube type for double and single acting doors. Frames in aluminum or steel can be provided to meet structural requirements.

Standard Sizes

Single doors - 26, 28, 30, 34 x 68 or 70 Double doors - 50 and 60 x 68 or 70

Special Sizes

From: 20 x 68

Hardware in COLOR

To blend the new honeycomb door with any room decor, push and pull hardware is available in color. An attractive band of color is silk-screened on the hardware in the area of the lock opening. Lock is semiconcealed behind hardware, yet is easily accessible. Blue-green color standard. Other special colors from which to choose.

Door knob hardware is attractive tear drop design. It is available with knob latch, thumb turn, or standard cylinder deadbolt.

FOR DETAILED INFORMATION WRITE DEPT. AR



Lock is semiconcealed in distinctive Kawneer-designed push-pull hardware.



Push and pull plates for special doors available with or without attractive blue-green color band.



Tear drop design; available with knob latch, thumb twn, or standard cylinder deadbolt.

Kawneer

ARCHITECTURAL PRODUCTS
DIVISION



However challenging the demands of your next laboratory project might be, Hamilton has anticipated them — with the most complete and flexible equipment ever built. New All-Science tables in six handsome finishes for modern against-the-wall, open-center floor plans. Popular All-Purpose equipment for varying classroom needs. Equipment custom-built for institutions and industry, and "packaged" laboratories, too.



HAMILTON MANUFACTURING COMPANY . Two Rivers, Wisconsin

THE RECORD REPORTS

CANADA

(Continued from page 32)

BID DEPOSITORY SCHEME ACCEPTED IN ONTARIO

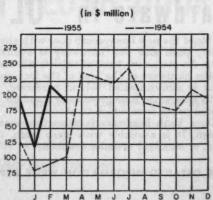
Intended to halt the practice of "bid peddling," a plan for mechanical and electrical subcontractors to submit their bids, when so directed by the architect. to a bid depository instead of to the general contractor has been accepted by the Council of the Ontario Association of Architects. The proposal, which is modeled in part on systems operating in Vancouver, Regina and the Lakehead, was prepared by the Ontario General Contractors Association, the Electrical Contractors Association of Ontario and the Ontario branch of the National Association of Master Plumbers and Heating Contractors of Canada.

The scheme will become effective in Metropolitan Toronto as soon as arrangements have been made with the Toronto Builders' Exchange to manage the bid depository. O.A.A. members have been asked to try the plan until the end of the year, although they may continue to call for separate and direct bids if the circumstances demand them.

CORRECTION

Keith L. Graham, described as a "designer" in the Record's story on the Steinberg supermarkets (February, p. 26), is an architect registered in Nova Scotia. Mr. Graham also designed the store at Manor Park, Ottawa, incorrectly credited to Eliasoph & Berkowitz.

Contracts Awarded: Comparative Figures*



*Compiled by the editor and staff of The Building Reporter, from information compiled by MacLean Building Reports

(More news on page 38)

Are you making the most of your opportunities

WITH

CABINET HARDWARE?

Cabinet hardware is becoming more and more important in modern homes. Every day builders and buyers are growing more aware of the decorative and useful values it adds to house salability. Are you making the most of your opportunities? See the Stanley pulls, latches, hinges, knobs and catches now available in decorator finishes, and in sizes and styles to suit every taste.

Stanley has just published this new 12 page catalog in color. It contains the complete, compact, quality Stanley line... solid brass, aluminum, chrome, distinctive Ranch Craft and Rustic Iron . . . the latter now available in new antique copper and familiar black finishes. Brand new items include the magnetic catch with the "floating" magnet, unique hinges for overlapping doors, smart decorator knobs,



streamlined capped hinges and a versatile rubber roller cabinet catch.

See this new catalog and make the most of your opportunities with cabinet hardware. A card to Stanley at 165 Lake Street, New Britain, Connecticut, with "New Cabinet Catalog" and your name and address will bring you your copy by return mail.



FCDA PUSHES EVACUATION: ODM STUDIES DISPERSION

One approach to Federal Government policy on civil defense was reiterated in repeated appearances on Capitol Hill last month of Federal Civil Defense Administrator Val Peterson. He left no doubt of his conviction that major American cities must be evacuated in case of atomic attack.

Visits to the Hill took Mr. Peterson to the House and Senate Armed Services Committees, the House Appropriations Committee, and the Senate Subcommittee on Public Works.

Mr. Peterson acknowledged that presently anticipated warning time is not sufficiently long to permit complete evacuation from densely populated areas of all principal cities. Even with increased warning time, he said, many

cities could not be completely evacuated because of inadequate highway systems. Mr. Peterson continued to urge "rapid improvement of our highway system" as a vital civil defense measure.

The Federal Civil Defense Administration also issued a new guide to be used in planning evacuation of target cities. Obtainable from the Superintendent of Documents, Washington 25, D. C., for five cents per copy, the bulletin answers questions on how states should plan for emergency evacuation of their cities. Title: "Evacuation of Civil Populations in Civil Defense Emergencies." Designation: TB-27-1. It is the first in a planned series describing evacuation techniques and operations of the various civil defense services.

Three types of evacuation are listed:

1) Strategic. During a period of international tension preceding actual warning, it may be desirable to move certain dependent, non-productive people away from danger areas. 2) Tactical. After warning that attack is probable, time may permit the mass evacuation of people from target areas. 3) Remedial. Following an attack, survivors not needed for civil defense services may be evacuated.

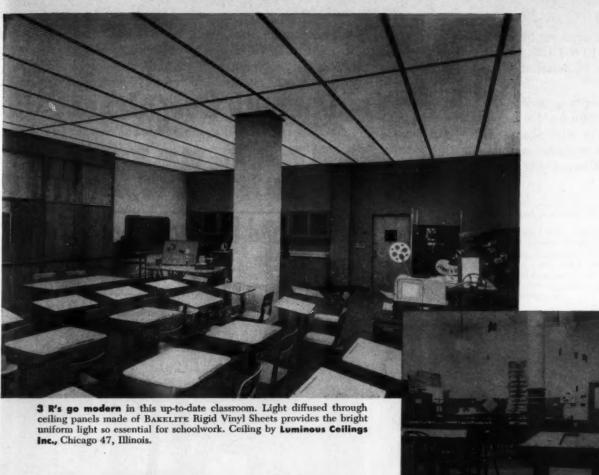
The President has asked Congress for \$12 million with which to survey 92 target areas with a view to improvement of escape routes. If the money is forthcoming, the studies will begin with a dozen cities of about a million population each.

One such study already has been done on Milwaukee with this showing reported: existing routes would enable 600,000 to be evacuated with three hours' warning time during night emergency; first stage improvements with an outlay of \$321,000 would raise this figure to 615,000; second stage with cost at \$6,629,000 would push it to 680,000; and building a freeway system outside the city proper with improvement of 130 miles at a cost of \$78 million would permit 825,000 to be emptied from the city under the prescribed circumstances.

ODM Restudies Dispersion

Also last month, the Office of Defense Mobilization established a new task force to revise its industrial dispersion policies. Composed of representatives from the Department of Defense, Federal Civil Defense Administration and the Department of Commerce, the group is (Continued on page 344)





SHADOWLESS LIGHTING FOR READING AND WRITING

For comparison, here's what the lighting in classroom looked like before renovation. Notice high, broken, ceiling area—sharp shadows and dusty pipes. New plastic ceiling is much lower, conceals all light fixtures and ceiling projections.

...from an illuminated ceiling made of BAKELITE Rigid Vinyl Sheets

No eyestrain here! This model class-room* features the very latest in school lighting — continuous fluorescent strip units behind a ceiling of corrugated, milk-white plastic sheets. This diffused, high-level illumination kills shadows completely . . . bathes the entire room in soft uniform brilliance.

Ceiling panels are made of BAKELITE Brand Rigid Vinyl Sheets about as thick as heavy paper. They rest on an aluminum frame hung from the true ceiling. They're quickly installed and easy to remove for cleaning or maintenance. In place, they conceal pipes, ducts and other ceiling projections. But they don't interfere with sprinkler systems because they soften and fall at about 150 deg. F.

Sound-absorbent pads fastened to the support frame will provide excellent acoustical conditioning.

These panels keep their good looks for years. They can be wiped clean or even scrubbed in soap and water, if necessary. And BAKELITE Rigid Vinyl Sheets resist yellowing, warping or cracking upon aging. They resist moisture, oil and combustion and are dimensionally stable.

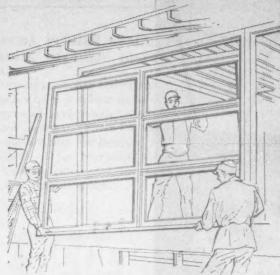
Include practical, beautiful plastic ceilings in your future designs. And remember BAKELITE Rigid Vinyl Sheets for screens, lampshades, signs and scores of other architectural applications. For more data write to: Dept. AR.3

*Model classroom designed by New York University School of Education in conjunction with officials of the National Education Association and Eggers and Higgins, New York architects.



BAKELITE COMPANY, A Division of Union Carbide and Carbon Corporation 130 East 42nd Street, New York 17, N. Y.

The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC



Design with Confidence with BILT-WELL

Quality Wood Products for the Home!



The famous BILT-WELL Double-Hung Unit Window



The Bilt-Well Exclusive Jamb-

- —Patented, thermostat-action weatherstrip provides twice the weathertightness with 1/10 the lifting effort.
- —Designed for use with plaster, drywall and all other conventional types of walls and construction.
- —Precision manufactured jambs and sills. Comes knocked down with all weatherstrip factory applied.
- —Sash removable for easy plastering and painting during construction

The most complete line of job-tested windows for the home!

Versatile BILT-WELL Awning Units



Fixed Unit

- —Designed for multiple application as awning, hopper, fixed or casement windows.
- —Completely assembled, furnished with all sash hardware installed except locking handle. Storm and screen panels available.
- —Economical...quick and simple to install...foolproof operation... easy to maintain.

Locking Handle Unit (Hopper type)

The most complete line of job-tested windows for the home!

In this period of mass-produced homes, with the competition for the home-buyer's dollar growing keener, the danger of overlooking quality for economy is greatly increased. Experienced, far-sighted designers, however, know the importance of selecting quality materials made by reliable manufacturers.

That's why more and more architects today are specifying the full line of BILT-WELL woodwork for the homes they design. They know they can depend on getting the same high quality of materials and workmanship...the same high degree of client acceptance...the same labor-

saving installation features...and the same assurance of product performance in every BILT-WELL product, whether it be a complete installation of windows or cabinets.

You owe it to your reputation to shun unknown, untried and unproved products in the homes you design. Look for the BILT-WELL trademark whenever you specify windows, doors, shutters, entrances, kitchen cabinets or any other millwork. It's your guarantee of quality and dependability.

For information, write

WORK

BILT-WELL WOODWORK Box 658 Dubuque, lowa

SINCE 1866

Manufacturers of the BILT-WELL Line of Outstanding Woodwork...BILT-WELL WINDOW UNITS—Awning, Double Hung, Casement, Basement, Storm and Screen, Gable, Sash & Louvers...BILT-WELL CABINET UNITS—Kitchen, Wardrobe, Multi-Purpose, Corner China, Mantels...BILT-WELL DOORS—Interior, Exterior, Combination, Garage, Screen, Flush, Entrances.

88 YEARS OF WOODWORKING EXPERIENCE





BILT-WELL Cabinet Units for Kitchens



Units for

any size

—Over fifty different types and sizes to meet storage needs anywhere in the household.

-Constructed in widths from 15" up, on 3" modular intervals.

-Doors are vacuum water-repellent treated to prevent warping.

—Satin-smooth, all clear, kilndried Ponderosa Pine. Ideally adapted to all finishes, natural or painted.

The most complete line of Home Storage Cabinets!

Multiple Purpose BILT-WELL Cabinet Units



Each Unit individually Carton Packed —For Kitchens, and storage walls in Bedrooms, Bathrooms, Dining and Living Rooms.

—Modern, continuous-line design styled to harmonize with modern or contemporary settings.

-Precision-machined, factory prefitted and individually cartoned for easy handling and simple, timesaving, on-the-job assembly and installation.

The most complete line of Home Storage Cabinets!

THE RECORD REPORTS

CONSTRUCTION COST INDEXES

Labor and Materials

U. S. average 1926-1929=100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

ATLANTA

	1,420	lential	Apts., Hotels Office Bldgs. Brick	Commer Factory Brick and	Bldgs. Brick and		lential	Apts., Hotels Office Bldgs. Brick	Commer Factory Brick and	Bldgs. Brick and
Period	Brick	Frame	and Concr.	Concr.	Steel	Brick	Frame	and Concr.	Concr.	Steel
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	86.1	83.6
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	87.1	85.1
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	97.4	94.7
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	136.4	135.1
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	157.1	158.0
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8	178.8
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	180.8	177.5
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	183.7	185.0
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	202.8	205.0
1952	278.2	274.8	271.9	274.9	271.8	218.8	221.0	212.8	210.1	214.3
1953	281.3	277.2	281.0	286.0	282.0	223.3	224.6	221.3	221.8	223.0
1954	285.0	278.2	293.0	300.6	295.4	219.6	219.1	223.5	225.2	225.4
Dec. 1954	285.8	278.5	293.1	301.6	294.6	220.9	220.6	225.1	226.7	227.3
Ian. 1955	286.5	279.4	293.2	301.7	294.8	221.0	220.8	224.9	227.0	227.6
Feb. 1955	286.5	279.4	293.2	301.7	294.8	221.0	220.8	224.9	227.0	227.6
Feb. 1955	131.9	128.2	increase over 1	9 39 126.1	126.5	156.0	% 165.7	increase over 19	133.0	140.3

ST. LOUIS

SAN FRANCISCO

Feb. 1955	141.9	143.1	ncrease over 123.5	129.6	125.7	146.9	% in	crease over 1 127.5	126.6	132.4
Feb. 1955	266.6	260.2	265.4	275.1	268.7	260.8	252.8	267.2	276.3	270.8
Jan. 1955	266.6	260.2	265.4	275.1	268.7	260.8	252.8	267.2	276.3	270.8
Dec. 1954	266.2	259.7	265.3	275.1	268.6	260.6	252.6	266.9	276.1	270.6
1954	264.6	257.9	263.7	273.3	266.2	257.4	249.2	264.1	272.5	267.2
1953	263.4	256.4	259.0	267.6	259.2	255.2	257.2	256.6 .	261.6	259.7
1952	259.1	253.2	249.7	255.0	249.6	250.2	245.0	245.6	248.7	249.6
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926-29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.: index for city A = 110 index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926–29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

wide VISQUEEN film

drastically cuts laying costs . . . protects concrete slabs from moisture

permanently

One man can handle a 20-foot seamless width of VISQUEEN film easily—get your moisture barrier onto the ground at much lower cost. No mopping. No joint sealing needed—only a 6" lap required. 1,000 feet of 4 mil VISQUEEN film weighs less than 20 pounds. VISQUEEN conforms to any shape—won't tear when you go around corners. VISQUEEN film will not deteriorate when in place. It will last for the life of the building. For convenience in handling, 20-foot widths are center-folded on 10-foot rolls. For maximum economy, narrower widths are available.

VISQUEEN &

is most effective moisture barrier for sidewalls

Eliminates moisture leakage from inside rooms into stud wall—does away with outside paint peeling, staining, blistering, rotting, stops plaster cracks from warped studs.

For details and specifications, see Sweet's Catalog—light construction file $\frac{3-a}{V_i}$ or architectural file $\frac{8}{V_i}$.

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"This construction substantially reduced the dead load weight of the building, thereby cutting framing costs, and reducing the construction time by 30 days. An over-all saving

of approximately \$60,000.00 was effected!"

The technique of using lath and plaster ceilings to fire protect structural floor beams and "shell" or perimeter fireproofing to protect columns, has advanced sharply in recent years. Fire resistive ratings up to 4 hours for beams and columns are provided with lath and plaster that weighs as little as 12 pounds per square foot. These constructions permit a reduction in dead weight of as much as 50%, thereby reducing the cost of steel framing.







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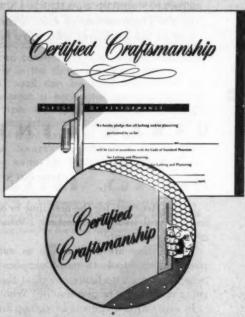
• The Certified Craftsmanship Certificate is a written pledge of adherence to work schedules, job cooperation, work of craftsmanship caliber and nationally recognized standards of quality. A certificate is yours for the asking from lathing and plastering contractors adhering to the Code of Standard Practices for Lathing and Plastering.

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The Housing Act of 1954 requires that a community develop a "workable program" for urban renewal as a prerequisite for Federal aid. The Housing and Home Financing Agency's official circular on the workable program states that: "In preparing its 'Workable Program' the locality must submit with respect to each of the essential elements . . . a statement of its present status and the steps by which it proposes to reach the established goal. . . . The purpose of the 'Workable Program' is that of helping the community: (1) face up to its slum and blight problem, (2) recognize the work which remains to be done, and (3) make the commitments, which, when completed, will result in a program of action which promises success."

The circular adds that "There must be a well-planned and well-organized action, using all the tools of slum prevention, physical rehabilitation, neighborhood conservation and slum clearance. No one

tool will do the job."

This monumental task involving not only the mechanics of planning but also the esthetics of planning, is obviously one in which architects should take a leading role from the earliest stage. Accordingly, the RECORD, with the cooperation of the URBAN LAND INSTITUTE, HHFA, THE PUBLIC ADMINISTRATION SERVICE, AMERICAN SOCIETY OF PLANNING OFFICIALS and Professor Christopher Tunnard of the Department of City Planning, Yale, has prepared a reading list in the hope that it may be of use to the architect who may be connected with community plans to develop a 'Workable Program.'

URBAN RENEWAL AND THE ARCHITECT

By EDMUND N. BACON, Executive Director Philadelphia City Planning Commission

Urban Renewal, for the first time in decades, places before us as a real issue the question, "What constitutes a good urban environment?"

Today there are available to us millions of dollars and powerful legal tools to recast significant sections of cities. Someone has got to figure out what the new environment is going to be like. The question is, "Who is going to do it?"

In many ways architects as a group are the ones least fitted to play the decisive role here. For years they have accustomed themselves to solving the problem as the client presents it to them, to confining their concern to a definite program and a definite site, usually a very small part indeed of the city in which it finds itself. Here, under urban redevelopment, there can be no dependence on the client's program, here the first task is the writing of the program itself.

On the other hand, the traditional approaches of the planner, the sanitarian, the public administrator, based on parallel and uniform concepts—"density," "floor area ratio," "Housing standards"—important as they are, cannot of themselves produce an environment capable of injecting new life into dying areas.

The element of design must be present. If it is not the whole cumbersome superstructure of finance and administration will fall flat on its face.

But how can you get design without designers?

The thing that is needed is design on a new, or third level, between that which is customary for either planner or architect. This is the kind of design that uncovers the basic structure of the neighborhood, that enhances and makes significant its salient features, that provides a skeletal framework within which its various parts may be left alone, refurbished, or rebuilt.

In architectural terms, it will provide a matrix to give form and urban scale to a series of individual projects. Because it is strong and well conceived of itself, it will permit great latitude of design by the individual architects designing around it, and still achieve a total unified urban expression far broader than could be obtained had one designer done the whole area.

Design at this scale falls outside the traditional role of either the architect or the planner, but needs something of the skill of both. Unless the creative design element is present, the whole is doomed to failure. And this element is not something that can be added at the last minute, after the relative procedures have been crystallized. It must be present from the first legislative discussion through policy formation to administration in the field. And that means that the designer must be on the job at every step.

Until the architectural profession takes a strong and effective role in basic policy formation, until the best of architectural designers take on the burdens and privileges of administrative posts where policy is made, urban redevelopment will fail to achieve its full purpose, and the "new" environment it produces will fall short of the potential that our day is capable of.

(Reading list on page 48)

INSULA

for INDUSTRIAL and COMMERCIAL BUILDINGS

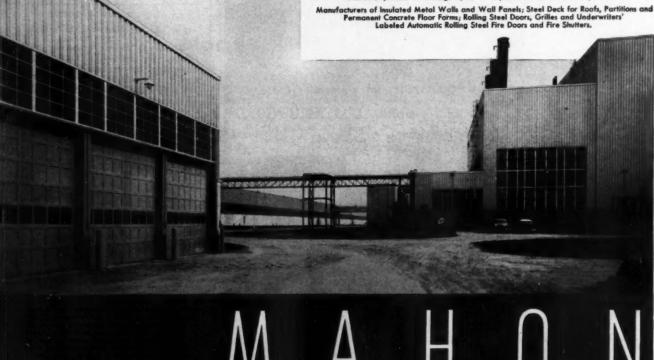
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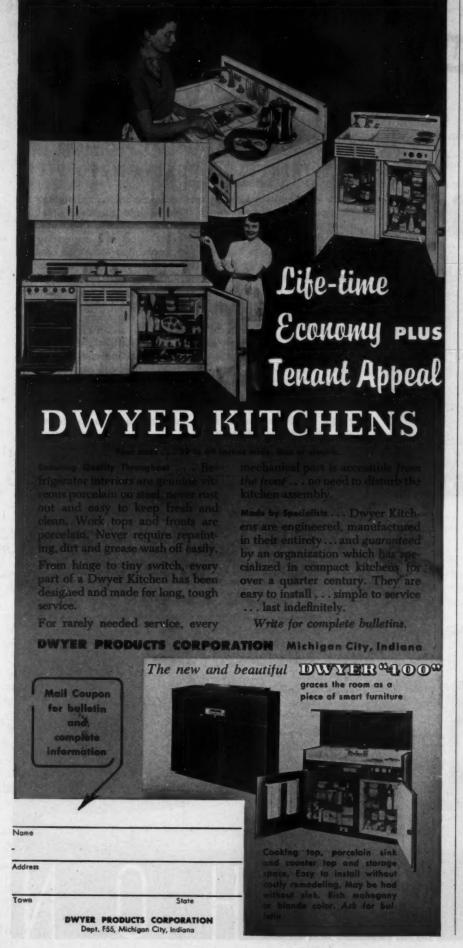
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REQUIRED READING

(Continued from page 46)

READING ON URBAN RENEWAL

Urban Redevelopment: Problems and Practices and The Future of Cities and Urban Redevelopment. Edited by Coleman Woodbury. University of Chicago Press (5750 Ellis Ave., Chicago) 1953. 764 pp, \$9.00.

These two volumes (which are bound in one) were unanimously mentioned as the most complete and concise references for urban renewal studies. They bring to attention the policies, measures and activities that can abolish the major forms of physical blight in cities.

Urban Redevelopment: Problems and Practices relates the actual planning experiences of leading city planners and deals with major operating problems and methods.

The Future of Cities and Urban Redevelopment includes an analyses of factors in urban growth and discusses the broad objectives and values of urban life that underlie many of the actual programs and policies.

How Localities Can Develop a Workable Program (The Prerequisites for Certain Federal Aids). U. S. Housing and Home Finance Agency (Washington, D. C.) 11 pp.

Published in October 1955 to clarify the "Workable Program" requirement on the 1954 amendments to Title I of the Housing Act of 1949.

ALSO RECOMMENDED

A Guide to Urban Planning Assistance Grants (Requirements and Procedures as authorized by Section 701 of the Housing Act of 1954). By Cole, Follin and Augur. HHFA, Urban Renewal Administration (Washington, D. C.) 1954.

An Appraisal Method for Measuring the Quality of Housing. American Public Health Assoc., Committee on Hygiene of Housing (New York) 1948–1950.

An Approach to Urban Planning. By Gerald Breese and Dorothy Whiteman. Princeton University Press (Princeton, N. J.) 1953.

Includes a comprehensive 37-pp bibliography.

Approaches to Urban Renewal in Several Cities. Urban Renewal Bulletin No. 1. HHFA and URA (Washington, D. C.) 1954. 31 pp, illus.

Included are significant aspects of combined programs of slum clearance, re-(Continued on page 374)



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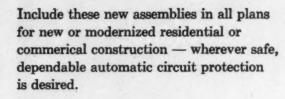
LOAD CENTERS and SERVICE EQUIPMENT

(Panel Base Assembly Type)



© T-M Load Centers and Service Equipment are available in four basic combinations to afford maximum of 4, 8, 12 and 20 poles (all single pole or combinations of single and double pole).

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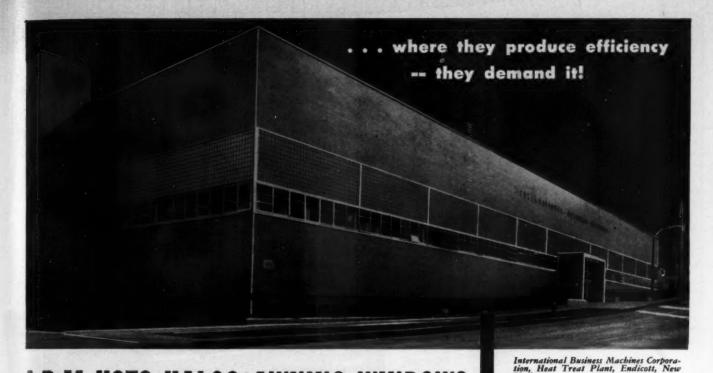


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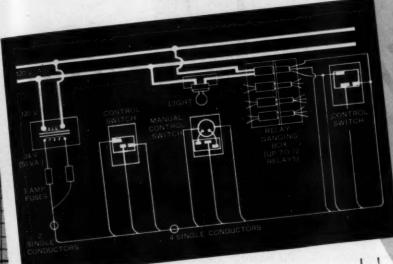
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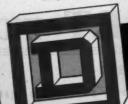




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Typical loads and circuits for kitchen, laundry, living areas and fixed utilities are shown. Also typical power center and circuit requirements for a six-room house.

LOAD AND CIRCUIT

			K	ITC	H	EN	
		Typical Walter	Proberts Cleanly	Nales .	Wee	Bresher JE (MA)	1
詹	RANCE	12000	10 KW.	120/200	3 =6	50A. 60A.	1
	OVEN (bush to)	4500	6 KW.	120/200	3 #10	30A.	1
2	RANGE TOP (Heavy Buty)	6000	6 EW.	120/200	3 #10	38A	1
	RANGE TOP	3300	4 KW.	120/200	3 #12	204	1
	DISHWASHER	1200	2 KW.	120	2 = 12	204.	1
	WASTE DISPOSER	300	2 KW.	120	2 #12	204.	1
8	BROILER	1500	2 KW.	120	2 #12	20A.	2 or men
6	RYER	1300	2 KW.	120	2 #12	20A.	2
	COFFEEMAKER	1000	2 KW.	120	2 #12	20A.	~
1	REFRIGERATOR	300	2 KW.	120	2 = 12	20A.	2
	FREEZER	350	2 KW.	120	2 #12	20A.	2
			LA	UN	DI	RY	-198
		1	Professed Great	Value	Mices	de redar se fina	
100	WASHING MACHINE	1200	2 KW.	120	2 = 12	20A.	1

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CHART FOR HOME WIRING SYSTEMS



l prime	
O	Use of more than one outlet is paralited, but not recommended.
00	Appliance may be direct connected.
00	Appliance may be direct connected.
00	
	These appliances may be direct connected on a single circuit. Grounded receptories required, otherwise.
0	circuit. Grounded receptocles required, etherwise.
0	Heavy duty appliances rego-
0	larly used at one location should have a separate circuit. Only one such unit should be attached to a single circuit at a time.
00	single circuit at a time.
800	Separate circuit serving only refrigorator and freezer is
888	Separate circuit serving only refrigerator and freezer is recommended.
99	Grounding type receptacle required.
00	May be direct connected— must be grounded.
90	Grounding type receptucle required.
0	Consider possible use in other locations.
	Consult Utility Co. for load requirements.

		LIV	IN	G	AF	E	AS		
-	CALL THE SECTION	Typical Waterpa	Professed Circuit	Vale	Whee	Breeker or Fore	Number Carlists	Typical Guidala	
	WORKSHOP	1500	2 KW.	120	2 = 12	20A.	2	0	Separate circuit recommended.
	PORTABLE HEATER	1300	2 IIW.	120	2 = 12	20A.	,	000	Should not be connected to circuit serving other heavy daty hands.
	TELEVISION	300	2 KW.	120	2 = 12	20A.	2	000	Should not be connected to circuit serving appliances.
	PORTABLE LIGHTING	1299	2 KW.	120	2 *12	20A	2	0	Provide one circuit for each 500 sq. ft. Divided receptorie may be switch controlled.
		FIX	E) (ITI	LI	TIE	5	
1		Typical Matteps	Professor	Value	Wires	Breaker at Fase	Marada Gardan	Typical Guilais	None Control
	FIXED LIGHTING	1200	2 KW.	120	2 = 12	26A.	-2-		Provide at least one circuit for each 1280 watts of fixed lighting.
	AIR CONDITIONER 34 N.P.	1200	2 KW.	120	2 #12	30A.	1	00	Consider 4 km 3-wire circult to all window or console typ
E	AIR CONDITIONER 1½ N.P.	2400	4 KW.	120/300	3 #12	20A	1	00	air canditioners. Outlets my than be adapted to individua 120 or 240 volt machines.
==	CENTRAL AIR CONDITIONER	5000	axw.	120/200					Consult manufacturer for recommended connections.
7	SUMP PUMP	300	2 KW.	120	2 #12	20A.	or more	000	May be direct connected.
7	HEATING PLANT	400	2 KW.	120	2 #12.	20A.	,		Direct connected. Some local cades require separate circuit
JB	BATHROOM HEATER	1500	2 KW.	120	2 = 12	20A.	,		Direct connected.

TYPICAL POWER CENTER AND CIRCUIT REQUIREMENTS

10-les Bage 1-10 tor 50 m 3-les Water für. 1-6 ber 50 m	30 360/130 with 30 300 with 30 130 with	Of hour 1-2 is Preser-Bel. 1-2 is Name 1-2 is		29 min 129 min 129 min 129 min 129 min
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to air condition a
SHOPPING CENTER?



Acme Supermarket in Shoppingtown, DeWitt, N. Y., features a modern, year-round Carrier air conditioning system. Peripheral ducts carry cooled air from a 30-ton Weathermaker, warm air from two gas-fired duct-type unit heaters.



The Addis Company is an exclusive specialty shop in this new shopping center. It has its own 40-ton Carrier system complete with an evaporative condenser for 95% water saving, and gas-fired unit heaters for economical winter heating.



Candlelight Shop, Shoppingtown's gift center, packs a selfcontained Carrier Weathermaker* into a side wall. The unit taps into ductwork previously installed for warm air furnace. New air-cooled Weathermakers require no water.

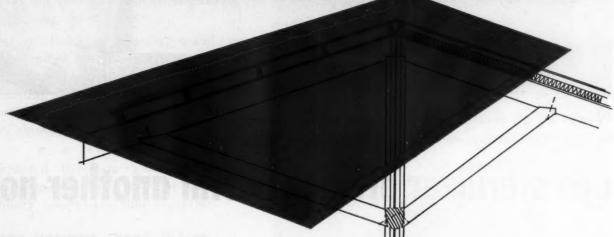
Carrier is the quickest way to the right answer

JUST 1-2 AND THE JOB IS THROUGH! Carrier has all the ways to control the temperature on any job, summer or winter—and all Carrier equipment is engineered to the same uniform standard. So short-cut hours of selection by (1) using the Carrier line as your shopping guide and then (2) comparing values. Get in touch with your Carrier dealer or distributor—listed in the Classified Telephone Directory. Or write to us directly. Carrier Corporation, Syracuse, New York.



air conditioning · refrigeration · industrial heating





THERE ARE ALWAYS NEW USES FOR WEST COAST LUMBER

This striking "inside-outside" truss is one of the many interesting new uses of wood for home construction. Intended primarily to give a feeling of greater height in the living room, it also helps create a spacious, informal atmosphere. Outside, this truss application makes possible a post-free overhang for a protected patio and children's play area.

For freedom of expression, specify wood... the economical, ever-modern building material. For dependable lumber, specify the West Coast species... Douglas Fir, West Coast Hemlock, Western Red Cedar and Sitka Spruce.

WEST COAST LUMBER

Douglas Fir • West Coast Hemlock Western Red Cedar • Sitka Spruce

Send for folder describing free literature available for your reference files. West Coast Lumbermen's Assn., 1410 S. W. Morrison St., Portland 5, Ore.



WALTER GORDON Architect, AIA

Graduated from Princeton and later took his M.F.A. there. Also studied at University of Paris, and at Yale University graduate school. Has designed numerous homes, many of which have been featured in national magazines.



Nurses are enthusiastic about Castle's new 3-minute Emergency Instrument Sterilizer. Engineers say its all-welded Monel construction...

ups sterilizer efficiency still another notch

You get no corrosion inside these modern sterilizers. They're solid Monel®. You get no chipping. No peeling.



Efficiency keynotes Resurrection's bulk units, too. Like the cylindricals, they were also supplied by Castle and have many of the same features. For economy, Castle makes them of Nickel-Clad Steel.

Units heat fast, clean easily. Their safety is extremely high. Their life is long. They aren't harmed by saline or other hospital solutions.

Now, for the outside, too

Engineers know that when inner and outer shells are different metals, they expand and contract at different rates. Monel has proven beyond question its value as an inner shell material. So now, Castle makes the outer shell and end ring (door collar) of Monel, too. Solid Monel. Then they weld all three into one solid unit that stays tight.

You reap the benefits. Corrosion resistance throughout. Long life.

Notice the other features of these Castle units

The photographs here show recent Castle installations at Chicago's new Resurrection Hospital... the 3-minute unit, top right... a 30-minute unit, top left... a Nickel-Clad Steel bulk unit in the small photo. Examine them closely. Notice the self-centering doors, the easy-to-use, clear reading Thermatic Control. Notice, too, the Monel trays.

For hospital planning help, write Wilmot Castle Hospital Planning Service, 1773 E. Henrietta Rd., Rochester 18, N. Y. Or call their local office.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York 5, N. Y.



NICKEL ALLOYS

... for low maintenance sterilizers

BRIXMENT WATERPROOFED

Brixment is waterproofed during manufacture, with the most effective air-entraining, water-repelling agent known.

The fact that Brixment is waterproofed can be demonstrated by making the crater test shown in Figure 1. Brixment's effectiveness in preventing the passage of water through the mortar can be demonstrated by making the test shown in Figure 2.

Waterproofed Brixment gives you three practical benefits which are not available in ordinary cement-and-lime mortars:

HELPS PREVENT LEAKY WALLS

Even under pressure, water cannot readily pass through Brixment mortar. Therefore, if the face brick are backplastered with Brixment mortar, a barrier is set up against the passage of water to the inside of the wall.

GREATLY INCREASES DURABILITY

Water cannot readily penetrate Brixment mortar. This prevents the mortar from becoming saturated - therefore helps protect it from the destructive action of freezing and thawing to which it is subjected many times each winter.

HELPS PREVENT EFFLORESCENCE

Waterproofed Brixment mortar checks the passage of water and keeps it from percolating down through the wall, dissolving salts which may be in the masonry materials, and carrying them to the surface.

Louisville Cement Co., Louisville 2, Ky.



FIGURE 1

Pour out a pile of Brixment and a pile of ordinary cement and lime. Make a crater in the top of each pile. Fill each crater with water. Note how the cement-and-lime mixture absorbs the water immediately. Note how the waterproofed Brixment holds it.

FIGURE 2

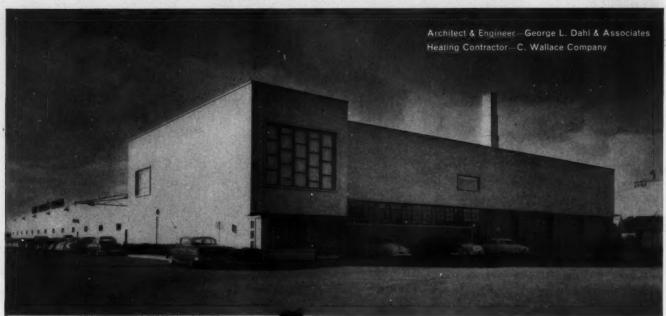


Prepare two slabs of mortar, one with Brixment and one with ordinary lime-and-cement mortar. After mortars have hardened, seal a lamp chimney to each of the mortar slabs, using wax or candle grease, and fill with water.



After 24 hours, note how water has gone into and through the non-waterproofed mortar, and how little water has gone into or through the Brixment mortar.

OW "RESERVE STEAM" HELPS MRS. BAIRD'S BREAD CO. KEEP PACE WITH GROWING MARKETS



KEWANEE

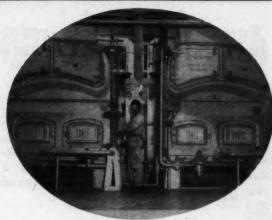
reserve

rated

plus

. . . BOILERS PROVIDE FOR FLUCTUATING LOADS AND FUTURE EXPANSION

It's "full steam ahead" for growth at Mrs. Baird's Bread Co., Dallas, Texas. That's because management looked well into the future in planning the company's modern plant. Take the boilers as an example. Past experience proved that boilers with reserve capacity could economically provide sufficient power to meet the needs of expansion. Kewanee Reserve Plus Rated Boilers were installed, with 50% extra power built in for additional capacity requirements. When fluctuating loads demand more steam at once... it's there with Kewanee. When expansion calls for more steam ... it's there with Kewanee. So, when you consider boilers, don't be misled by promises that a boiler delivers enough steam to meet average daily requirements. Look for reserve to assure performance beyond the call of usual duty. Consider Kewanee Boilers, rated on nominal capacity to operate at "cruising speed". You'll get greater efficiency at lower cost, plus longer boiler life. Only a boiler rated on nominal capacity can make that guarantee.



Here are 2 Kewanee No. 5188 Boilers Installed at Mrs. Baird's Bread Co.



YOU can depend on KEWANEE engineering.





ENGINEERING

THIS GREAT WINDOW HAS ESTABLISHED STANDARDS BY WHICH ALL ALUMINUM AWNING WINDOWS MUST BE MEASURED

> No matter what the standards by which aluminum awning windows are measured, the Ludman Auto-Lak always emerges as first choice. For this superb window established such high standards in its field, that in all its years of top performance no other window has come close enough to give the phrase "or equal" any meaning. This product clearly stands alone in the field of awning windows.

> Auto-Lok is the only window that fully meets all of the ten most important requirements in a window that experts" agree are essential. Here is a window that only Ludman can produce the foundation upon which the fine family of Ludman products has been built.

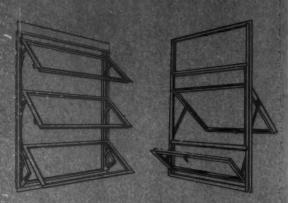
> The Auto-Lok Window permits complete control over both the quantity and the quality of ventilation. Fresh air is assured, even when it's raining. The bottom night vent insures ventilation with protection from prowlers. protection from the elements

> The Auto-Lak Window is the tightest-closing window ever made — and only Auto-Lak will stay. tightly closed for the life of the building without the periodic adjustment required by all other awning windows. Completely weatherstripped, the Auto-Lok Window is an ideal solution when True Climate-Control is sought, Permanently weathertight — it seals out both heat and cold, and substantially reduces demands upon Air Conditioning systems and Heating plants.

perfect window the resources of Ludman Corporation can produce.

"Geoffrey Baker and Bruno Funaro in Windows in Modern Architecture

(SEE NEXT PAGE)



"...your aluminum awning and intermediate projected windows are in accord with my recommendation, as Modular Coordinator, for windows to be installed in modular masonry walls."

William Demarest, Jr. Modular Coordinator American Institute of Architects



UPON MODULAR MEASURE

Ludman takes the lead with a forward step of major significance to many architects. In commenting upon this important step, Mr. Demarest

"The Ludman Corporation is to be congratulated for introducing window sizes based upon Modular Measure, the common-sense method of dimensioning which is being adopted by a fast-growing number of architects, builders and manufacturers of masonry and other building products."

This is just one more evidence of Ludman engineering leadership . . . just one more example of the foresighted kind of planning that has made Ludman products the instinctive first choice of so many progressive architects.

Ludman leadership in adapting design to Modular Sizing is a reflection of the thoroughness with which every Ludman product is planned and produced. From raw aluminum to finished product, Ludman products are produced under strict quality control. Every Ludman product is engineered to perform its task easily, to operate smoothly, and to insure the long operating life that delivers real economy.

IMPORTANT NEW PROOF THAT

LUDMAN window engineering

Uniform load tests and Hardware load tests were made on a window 4'-01/2" wide and 8'1" high with 4-lite ventilators, which is the largest standard intermediate projected window as shown in our catalog.

Air infiltration tests were conducted on window units with 4-lite ventilators measuring 4'0" wide and 2'8" highthe largest opening ventilator as shown in our catalog.

Our interpretations of these tests reveal the following results:

10 Times Tighter

Ludman Intermediate Projected Windows allow only 1/10 as much air leakage as windows that only meet AWMA P-A2 specifications. This means reduced heating and airconditioning costs. Tables are now available that prove how quickly these savings are reflected in the Operating Budget of a building. LUDMAN LEADERSHIP IN WEATHER-STRIPPED WINDOWS MEANS LASTING SAVINGS!

4 Times Stronger

Ludman engineers have established that a good Projected Window needs this added strength to insure proper performance.

41/2 Times Stronger

The vital operating hardware in the Ludman Intermediate Projected Window is built to withstand daily abuse.



PITTSBURGH, PA

PIDENTIAL PROPERTY OF MATE CONCLUSIONS OR

REPORT

February 7, 1955

Report on Tests Conducted on

LUDMAN WEATHERSTRIPPED INTERMEDIATE PROJECTED WINDOW UNITS

For LUDMAN CORPORATION, North Miami, Florida

TEST RESULTS

The results of the air infiltration, uniform load and hardware load tests along with the specification maximum permissible requirements were reported below.

AIR INFILTRATION TEST

7461

The air infiltration determined on the as received window unit in accordance with the procedure indicated in Paragraph 2.8.3.2 of Aluminum Window Manufacturers Association Specification P-A2 was determined to be 0.09 cubic feet per minute per foot at a static pressure equivalent to a wind velocity of 25 miles per hour.

Specification maximum permissible was 1.00 cubic feet per minute per foot.

UNIFORM LOAD TEST

The maximum deflection of any window member under a load of 15 pounds per square foot as indicated in Paragraph 2.8.3.1B of Aluminum Window Manufacturers Association Specification P-A2 was determined to be 0.068 inches.

Specification maximum permissible was 0.274 inches.

HARDWARE LOAD TEST

The deflection at the free corner of the ventilator with friction shoes adjusted to a firm, but smooth, operating condition when tested as indicated in Paragraph 2.8.3.1A was determined to be 7/8 inches.

Specification maximum permissible was 3-1/2 inches.

HERE ARE A FEW OF THE ADDED FEATURES THAT PROVE LUDMAN'S SUPERIORITY IN WINDOW ENGINEERING

- White Bronze Corner Brace For Vents
- Adjustable Friction Shoe Compression Spring
- Windows Can Be Inside or Outside Bead or Mastic Glazed
- · Hardware & Screws Attached With Threaded Grommets
- Cam Handle With Concealed Strike For Project-In Vents
- Mullion Bars Provide Caulking Pocket For Weathertight Construction
- · Mullions Fluted Vertically For Appearance and Strength
- Completely Weatherstripped

SEND COUPON ON NEXT PAGE ...

LUDMAN Window Panels



OF LUDMAN ENGINEERING

Skin-wall . . . Curtain-wall . . . Panel-wall. To assist the progressive architects who are seeking new methods of gaining beauty and utility, while reducing construction costs, through these new building techniques, Ludman is proud to introduce Ludman Window Panels. An extremely efficient, very versatile, and thoroughly practical approach to a new construction method, Ludman Window Panels offer you almost unlimited scope in planning. Consult Ludman engineers for full cooperation in developing your next building . . . from the inception of the sketches to the final step in construction, Ludman engineers are at your service.

LUDMAN LEADS IN WINDOW ENGINEERING



LUDMAN AUTO-LOK ALUMINUM AWNING WINDOWS

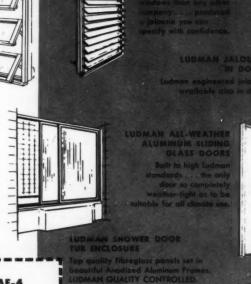
The window industry's most outstanding development . . . the window that has solved so many of the architect's problems

WOOD AWNING WINDOWS

The same Ludman quality the same tight closure available in wood windows through jobbers everywhere.

YOUR PRESTIGE IS REFLECTED IN THE PRODUCTS YOU SPECIFY

The architect, as do other professional men, cherishes his prestige . . . knows it as his most valuable asset. Fine products . . . products that look better . . . perform better . . . perform well and economically for the life of the building — these are major factors in supporting the reputation of the architect. And the best products cost so little more to install . . . cost so much less across the years. Protect your prestige when you specify!



LUDMAN CORPORATION . North Miami, Floride . Dept. AF-

Please send me full information on the following Ludman Products:

Auto-Lok Aluminum Awning Windows Wood Auto-Lok Awning Windows Jalousies Jalousie Doors Aluminum Framed Sliding Glass Doors Shower Door Tub Enclosures Intermediate Aluminum Projected Windows Single Sash Wood Awning Windows

Name......Firm.....

LUDMAN SINGLE SASK

A Single Sash Wood Unit with extra ordinary design flexibility, Handled by wood jobbers everywhere.

LUDMAN INTERMEDIATE ALUMINUM

The tinest Projected Windaw ever made completely weatherstripped — engineered to high LUDMAN standards



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MIRACLE WEDGE*

Weathertight Closure . . . originated by Overhead Door Corporation in

1921, this feature is the basis of construction of every door, from the smallest resi-

dential garage door to the largest industrial door.

Vertical tracks incline away from jambs at a pitch of 1/4" per door

End hinges with roller sleeves of progressively graduated height guide the door tightly against jambs and lintel, yet free it quickly when opening.

Built, installed and serviced by the world's largest manufacturer of doors and door operators exclusively!

* TRADE MARK

For easy solution of heating problems, employee protection, traffic speed-up and lasting satisfaction under constant hard use, insist upon The "OVERHEAD DOOR," first and finest in its field. This quality door is built of wood, steel or aluminum in any size to fit the opening . . . a "custom" door at production line prices. Consult our engineering and research staff about unusual installation problems.

Equip All Doors with **ELECTRIC OPERATORS** and Remote Control

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Design, build and sell more natural wood beauty and character in modern homes with dependable Western Red Cedar Siding. It's the wood that meets the popular demand of today's home buyers for quality materials ... to express individuality through a variety of decorations.

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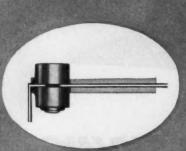
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MBB Top Pivot . door and jamb leaves mortised. Modern design for standard construction.

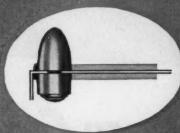
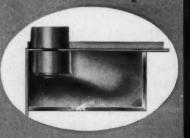


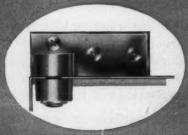
ABB Top Pivot . door and jamb leaves mortised. Asylum design for use in institu-



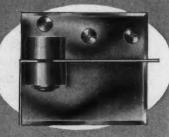
No. 580 Top Pivot . door and jamb leaves mortised. For bull nose type metal frame with wood or hollow metal doors.



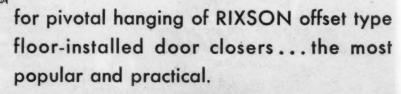
No. 280 Top Pivot . door leaf surface mountedjamb leaf mortised. For wood or kalamein doors having wood, kalamein or metal frames.



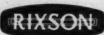
No. 380 Top Pivot . jamb leaf surface mounteddoor leaf mortised. For hollow metal or wood doors having a channel iron frame.



No. 480 Top Pivot . door and jamb leaves surface mounted. For wood, kalamein or tubular steel doors having channel iron frames.



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STRAN-STEEL DECKING IS ...

LIGHTWEIGHT but STRONG: Dead load savings up to 10 lbs. Total weight of this dry system, including 1" of insulation board, is less than 3 lbs. per sq. ft. Great strength-to-weight ratio assures maximum economy in materials.

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—where nearly a score of buildings demonstrate a "new concept" of air conditioning with Yorkaire Systems!



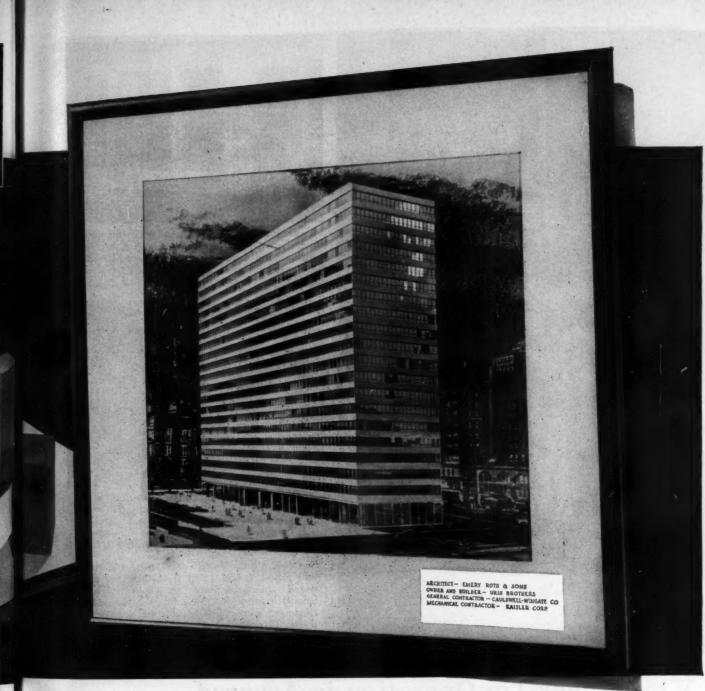
Exciting 3 Penn Center Plaza nears completion
—the first new office building to be erected
in Philadelphia's fabulous Penn Center redevelopment area!



York brought the right kind of air conditioning to the Empire State Building, Cincinnati's Netherland-Plaza Hotel and to 27 of Miami Beach's largest, newest hotels. Denver's new Mile High Center, San Francisco's new Equitable Life Assurance Society Building and the striking new Colgate-Palmolive Building in New York have Yorkaire Systems, too. Famous York companions to 3 Penn Center Plaza are shown on the map above.



YORK CORPORATION



Superb new 3 Penn Center Plaza features two compact 800-hp. York Turbo Water Cooling Systems located in the basement. They provide the cooling for 1200 Model CF Yorkaire Conditioners in the individual rooms.

The ability to meet rigid specifications, to bring the right kind of air conditioning to a building—and to do it all at a reasonable price—appeals strongly to our first-time customers. They call it a "new concept" of air conditioning.

This concept is dramatically illustrated in the Penn Center area. As in all large buildings, heat loads and glass areas and floor areas and numbers of occupants . . . economic considerations, taxes, depreciation and a score of other factors varied from building to building

all around the Center. Obviously, no one system—or even two or three—could air condition all these buildings best. That's why York carefully selected and then precision-engineered each Yorkaire System to fit the air conditioning needs of the particular building in which it is installed.

Your building can have the right kind of air conditioning, too. Call your York District Office (listed in the classified phone directory of every major city). Or write directly to York Corporation, York, Pa.

air conditioning and refrigeration

MECHANICAL COOLING SINCE 1884





Superior weather-tightness is an outstanding feature of Curtis Silentite doublehung windows. They've withstood sand storms, blizzards, floods, with their weather-tightness and ease of operation unimpaired.



Many beautiful combinations are yours with standard Silentite units, all the way from "ribbon" windows to enclosed porches and breezeways. Their slender mullions provide the wide glass area so desirable today.

See your Curtis Woodwork Dealer and consult Sweet's Architectural Catalog for full details about the many types and styles of Silentite windows—including double-hung, casement, convertible, awning and panel windows. Literature and dealer's name upon request. Curtis Companies Service Bureau, Clinton, Iowa.

Why Finger-Tip Operation is Assured with a Curtis Silentite Window

Thanks to the patented coiled-spring suspension method, combined with factory fitting of sash to frame and the use of sliding bars and double Z spring weather-strips, a Curtis Silentite double-hung window literally "floats" in the opening. Lifetime ease of operation is built right in.

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CURTIS WOODWORK
Heart of the Home



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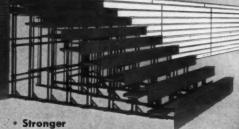
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GEORGIA Atlanta Public Schools, Atlanta H.Q. Inf. Cen. Fld. House, Ft. Benning

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TELESCOPIC GYM SEATS*



- · Roomier Lighter
- Easier Operating

New Catalog-Write For Your Copy

*Medart Telescopic Gym Seats are fully protected by U.S. Patents

SPECIFY the best, then INSIST on it!

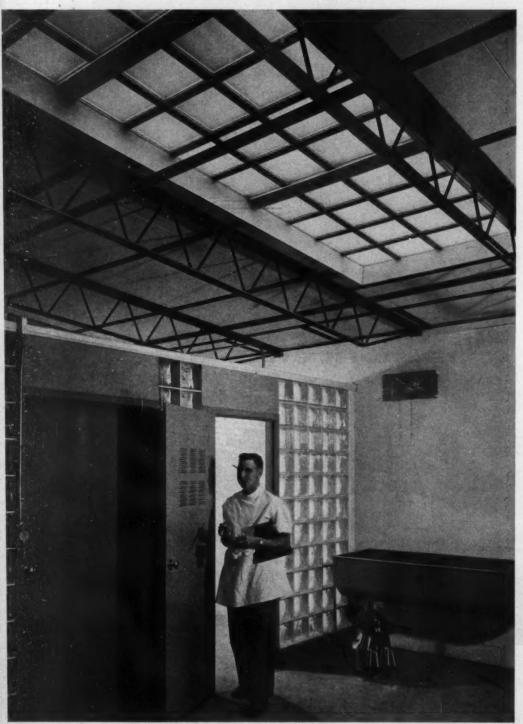
FRED MEDART PRODUCTS CO., INC. 2340 DeKalb St. St. Louis 18, Mo. 3540 DeKalb St.





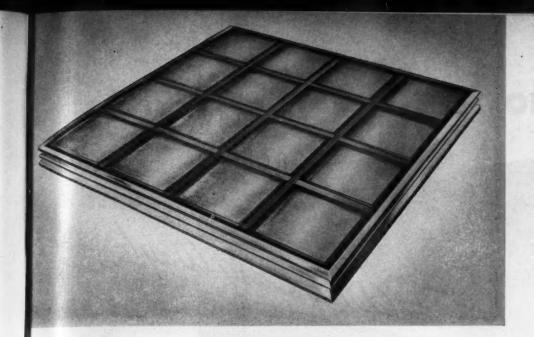
TESTED AND PROVED

Glass Panels bring cool daylight in through the roof...



Owens-Illinois Toplite installed in the North-Central Substation of the Ohio Agricultural Experiment Station near Castalia, Ohio. Acting as a daylighting team, the Toplite Panels and glass block provide sufficient daylight during normal days without need for artificial lighting.

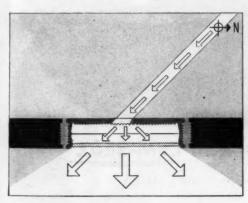
Toplite Panels may be installed in continuous strip, pattern, or in individual panels. Use a Toplite Panel as you do a lighting fixture. They permit daylighting of all building areas regardless of location or distance from exterior walls.

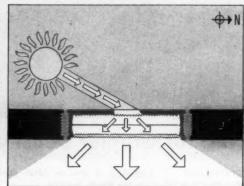


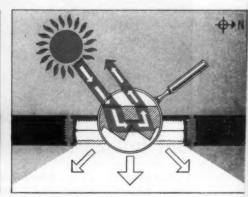
Toplite Roof Panels are factory-fabricated ... ready to install

They are shipped in individual crates marked to show correct orientation and directional positioning; for speed and ease in installation. Panels arrive on job site ready to install. They are set on prepared curbs and anchored ready for flashing by the roofer.

Why Owens-Illinois TOPLITE meets the demand for good daylighting







Transmits north light

Maximum transmission of north light is a desirable quality in toplighting because of its uniformity and freedom from glare and solar heat. Note how the prism structure of Toplite affords efficient transmission of north light.

Accepts winter sun

Since low winter sun is comparatively weak in relation to high summer sun as far as glare and solar heat are concerned, maximum transmission is again desirable. This illustration shows how Toplite accepts and transmits winter sunlight.

Rejects summer sun

Other materials which transmit north light and low winter sun also transmit high percentages of light during the hot, summer months. Toplite rejects direct light and heat from hot, summer sun, but transmits much of the cool, north light.



Write for free booklet on Toplite Roof Panels

The complete story of this great new advance in efficient utilization of free daylight is available in this new bulletin. For your free copy write today: Kimble Glass Company, subsidiary of Owens-Illinois, Dept. AR-5, Toledo 1, Ohio.

TOPLITE ROOF PANELS
AN (I) PRODUCT

OWENS-ILLINOIS

GENERAL OFFICES · TOLEDO 1, OHI



Get full 28 Day Curing for Greater Density with CEM-SEAL

Unless properly sealed, a new concrete floor has a natural tendency to deposit alkaline salts on the surface as it cures. This causes surface powdering, called "dusting" or "bloom."

<u>CEM-SEAL</u> acts as a cap or dam to hold moisture down below the surface. This prevents formation of the damaging salts—and it also prolongs the curing period of the concrete. The surface comes through denser, harder, more resistant to wear.

Application is simple and easy. Treat acres of floor in a short time with big sheepskin applicators. Floors can be opened to traffic in just 4 hours.

<u>CEM-SEAL</u> is also an ideal primer for renewing old concrete floors.

Check these <u>CEM-SEAL</u> advantages — never before available.

- 1. Goes on easy just sweep floor and apply.
- 1-coat quick dry application seals moisture in the concrete.
- Complete curing of concrete gives you a dense, uniform surface with longer life.
- Protects floor from stains while other building trades are at work.
- 5. Prevents "dusting" and efflorescence.
- 6. Gives you a smoother surface for easy maintenance.





Hillyard Maintaineers®, trained floor experts, are stationed in principal cities. There is one near you, who will be glad to consult with you on your problem of treatment or maintenance of any type floor No charge, no obligation for this service.

Mail This Coupon Today



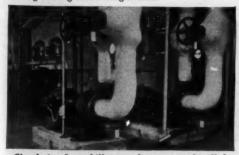


ST. JOSEPH, MISSOURI San Jose, Calif. Passaic, N. J. Branches in Principal Cities

THEY WANTED QUIET OPERATION!



Installation of B & G Universal Pumps for circulating heating and cooling circuits.



Circulation from chiller to cooling tower is handled by B & G Universal Pumps.



B & G Type "SU" Heat Exchanger, used for heating system water with steam.

NEW ROTARY INTERNATIONAL BUILDING SELECTS B&G UNIVERSAL PUMPS AND HEAT EXCHANGERS FOR HEATING AND COOLING SYSTEM

The advantages of mechanically circulated water for both heating and cooling are well illustrated in this installation.

To assure quiet operation, B & G Universal Pumps are used to circulate all water, including that in the chiller and cooling tower circuits. The same piping system is used to circulate hot water in winter and chilled water in summer. Convectors with adjustable-speed fans act as room distributing units.

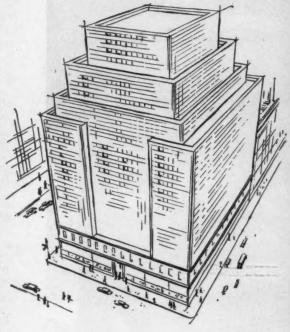
For ventilation, fresh filtered air from a main ventilating fan is introduced to the convectors through small flexible tubes. This air passes over the convector coils and is either heated or cooled.

Water for the heating system is heated with steam in a B & G Type "SU" Heat Exchanger. Steam is also used to heat the service water by means of a storage tank with a steam coil installed.

Architects: Maher & McGrew, Evanston, III. Construction Engineers: Neiler, Rich & Bladen, Chicago. Heating & Air Conditioning: C. W. Johnson, Inc., Chicago. Plumbing: O'Callaghan Bros., Chicago.



Dept. DW-32, Morton Grove, Illinois Canadian Licensee S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto A comfortably quiet atmosphere welcomes visitors to TWA's smart reception area. The attractive Travertone ceiling contributes much to these surroundings by soaking up disturbing noise and carrying out the relaxed, modern décor.

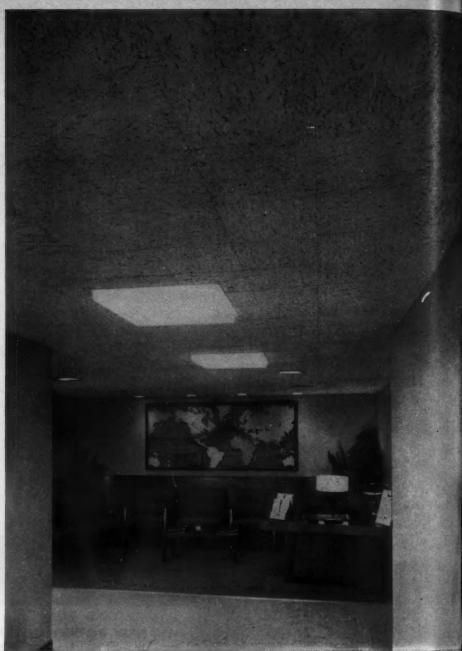


TRANS WORLD AIRLINES,
New York City, N. Y.

TWA Architect: C. Schlichtemier.

General Contractor: Cauldwell-Wingate Co.

Acoustical Contractor: William J. Scully Acoustics Corp.



Planned for beauty - Sound conditioned for comfort

The latest developments in contemporary design are incorporated in the new executive offices of Trans World Airlines. Every feature contributes to office beauty, employee comfort, and over-all efficiency. Even the ceilings of Armstrong Travertone* were chosen with these objectives in mind.

Travertone's high acoustical efficiency and handsomely textured surface help provide office personnel with the quiet, attractive surroundings necessary for comfortable working conditions.

Travertone's fibrous mineral wool composition soaks up as much as 80% of the noise that strikes it, keeping mistakes caused by distracting noise to a minimum.

Its smartly fissured surface blends well with the modern décor, and Travertone's white paint finish helps diffuse light evenly without annoying glare.

In addition, Travertone is completely incombustible and fully meets New York City's strict fire-safety regulations. Maintenance is easy and economical, too.

Travertone is just one of six Armstrong acoustical products. Get full details on Armstrong sound-conditioning materials from your Armstrong Acoustical Contractor.

For your free 1955 edition of "Armstrong Acoustical Materials," write Armstrong Cork Company, 4205 Rock Street, Lancaster, Pennsylvania.

* Trade-Mark



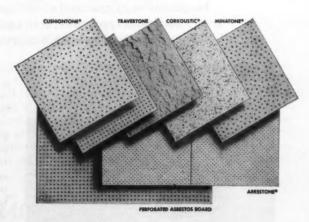
The high acoustical efficiency of this Travertone ceiling provides the undisturbed quiet needed for concentration. Travertone is quickly installed by cementing or suspension methods and can be scored and cut to fit around fixtures.



Mistakes caused by distracting noise are reduced in this modern office area. Noise-muffling Travertone soaks up disturbing noise, prevents the clatter of business machines from building to distracting levels.



Completely incombustible, Travertone meets all fire-safety regulations. Its handsomely fissured surface resembles travertine marble and can be washed or repainted as often as desired without impairing its acoustical effectiveness.





Better, More Economical Hospitals Are Built with CONCRETE

More and more designers and builders are turning to concrete construction for hospital buildings. That's because concrete offers greater durability, safety and economy.

Concrete meets every structural requirement for hospitals. It has great strength and unexcelled resistance to destructive forces. Durable concrete protects patients and hospital staff against violent storms, 'quakes, explosions, atomic blasts and fire. Remember, concrete can't burn.

In addition to its structural advantages, concrete's neat, clean appearance, both inside and out, symbolizes the cleanliness associated with hospitals. And its enduring beauty makes concrete hospitals a source of community pride.

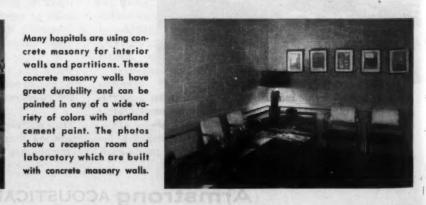
Hospital boards and administrators like concrete's moderate first cost, low upkeep cost and long life. They result in low annual cost.

Concrete construction is versatile. It can be used in single or multi-story hospitals designed to meet the needs of any community. For more information, ask for free illustrated booklet. It is sent only in U.S. and Canada.

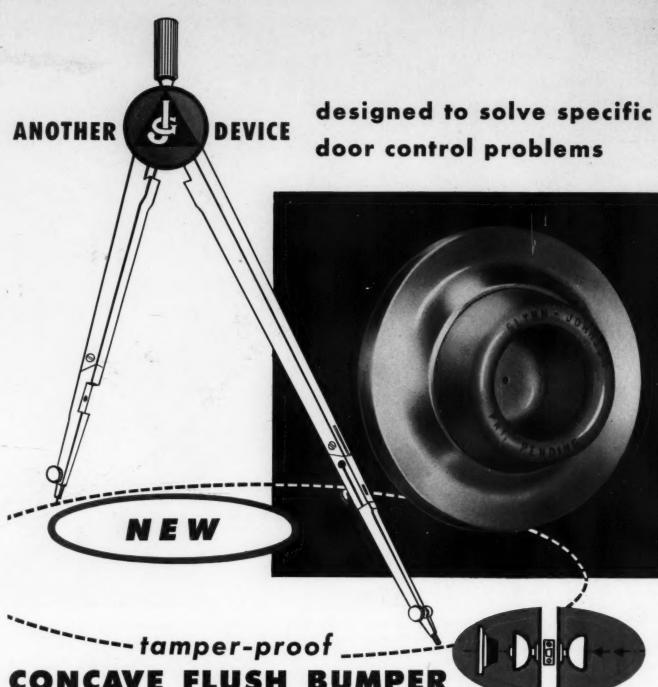
PORTLAND CEMENT ASSOCIATION 33 West Grand Avenue, Chicago 10, Illinois A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work



Many hospitals are using concrete masonry for interior walls and partitions. These concrete masonry walls have great durability and can be painted in any of a wide variety of colors with portland cement paint. The photos show a reception room and laboratory which are built with concrete masonry walls.







CONCAVE FLUSH BUMPER

ideal for button-type locks

Has no visible mounting screws . . . uses hidden method of attachment. Solves problem of unauthorized removal of bumper or rubber in public buildings. Concave bumper permits knob to strike without damaging or engaging button-type lock mechanism.

GJ devices that solve specific noise



GJ 65 silence slams,



roller latch silent . . . no prevent rattles. I annoying click



latch for secret doors no hardware shows.



holds by tension.

Write for complete details and template information.

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Like Easy Fishing? GET NE Sherarduct RIGID STEEL CONDUIT

Easy fishing . . . that's one reason contractors like Sherarduct rigid steel conduit. In addition to a smooth inside surface, Sherarduct's accurately cut threads let conduit ends butt inside the coupling . . . eliminate gaps that interfere with easy fishing.

Sherarduct has other plus features as well: The Sherardizing process of galvanizing that alloys zinc with the conduit wall, (plus a baked-on Sher-enamel coating) fortifies Sherarduct against rust and corrosion for life. All surfaces, including the hill and valley of every thread, are securely protected against corrosion.

Finally, the gradual heating and cooling of the Sherardizing process normalizes the metal in an annealing like process. Result: easier working, forming and bending on the job.

Write for a free copy of our new Sherarduct facts book. You'll see why the Sherardizing principle makes Sherarduct "galvanized conduit at its best."

Listed by Underwriters' Laboratories, Inc.



LIFE-TIME CORROSION PROTECTION EASY FISHING ZINC PROTECTED THREADS STRONG COUPLINGS THOROUGH GROUNDING **EASY BENDING**

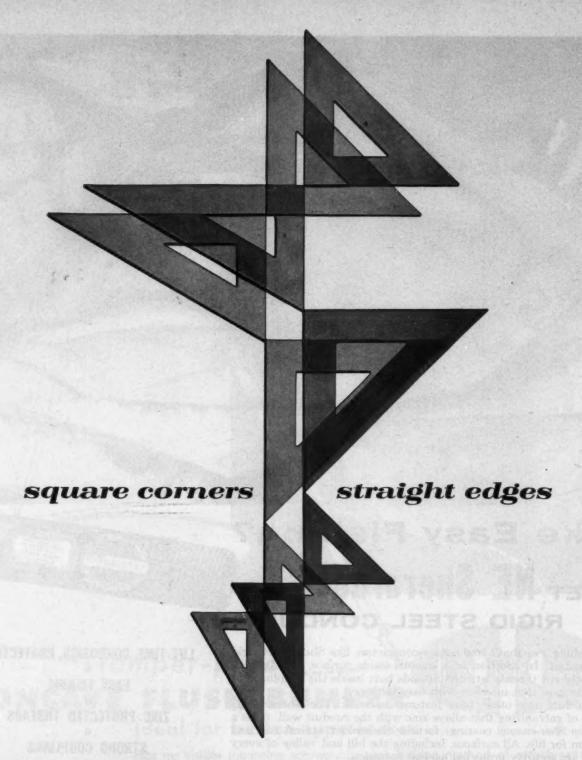
Sherardizing is galvanizing at its best . . . Sherarduct is galvanized conduit at its best



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PITTSBURGH, PA.

3 Plants • 10 Warehouses • 36 Sales Offices



High-precision manufacturing equipment and constant laboratory checking enable us to make sure that every resilient tile we produce is straight-edged and square when it leaves the factory; efficient modern packaging keeps it that way until ready for installation. These precision-cut tiles fit together

smoothly and easily for low installation costs, and minimize wastage. Uniform thickness, accuracy of cutting, trueness and clarity of color, surface smoothness, ease of maintenance and built-in durability—all of these qualities combine to make this line the world's most popular line of resilient tile floorings.

KENTILE, INC.

America's largest manufacturer of resilient floor tiles

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SHEET, STRIP AND ROLL COPPER now come marked with gauge and temper

Effective with current production each sheet or strip of Revere Copper will be marked as to gauge and temper.
All coils of Revere Copper will be marked on the outer copper wrap. Sample marking (actual size) is shown above. These markings also apply to LEADTEX, Revere's Lead-Coated Copper. The ink used for marking is watersoluble so that it is readily removed by a damp cloth or by water alone.

Now, you can be sure, at a glance, what gauge and temper copper you are getting, when you specify Revere. Also included is the Revere Seal (shown above) which identifies the manufacturing source of the copper as American. This seal and the line, "A QUALITY PRODUCT BY REVERE U.S.A." also appears on all shipping cases.

So in order to make sure that you get the gauge and temper of copper you specify, make certain the sheet, strip and roll copper you order, or use, bears the Revère stamp.

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Southern Hotel Gets Triple Bonus Using <u>Certain-teed</u> Firestop Bestwall.

See Chapter X, 1953-54 Edition, SOUTHERN BUILDING CODE, for rated constructions with Firestop Bestwall. (Gypsum Wallboard with Gypsum Core including Vermiculite.)

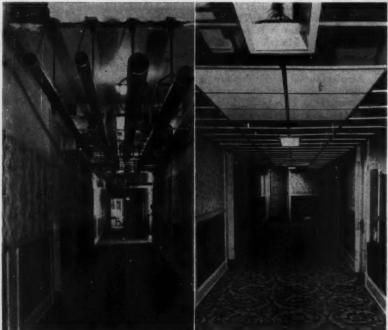
Fire Resistance Plus Ease of Application and Less Inconvenience During Construction Important Factors in This Air-Conditioning Job

Guests at the Piedmont are safe as well as cool, thanks to the air-conditioning installation. Over 25,000 square feet of Firestop Bestwall Gypsum Wallboard was specified for all corridor ceilings—covering the air-conditioning ducts—because of its great resistance to fire, ease of application, and because it meant less interference with hotel operation during remodeling. An interesting construction feature: Bestwall panels are left loose in the steel channels (see cut) to give easy access to air-conditioning ducts and to telephone and other wires.

Certain-teed Firestop Bestwall was the first gypsum wallboard to meet Code requirements for one-hour fire resistance over both wood and steel framing in single layer application. Firestop is much more fire resistant than ordinary gypsum wallboard. And it's stronger and more resistant to sound transmission.



Piedmont Hotel, Atlanta, Ga. Air-conditioning units and installation by Gowdy and Durkin, Inc., Atlanta, Ga.; Firestop Bestwall application by Acousti Engineering Co., Atlanta, Ga.; Cary B. Gamble & Associates, Consulting Engineers, New Orleans, La.



Builders get a bonus from Firestop too. It's light—cuts cleanly—and is quick and easy to apply, making for a neat remodeling job. Certain-teed Firestop Bestwall is manufactured under Underwriters' Laboratories service and has been accepted by building officials in more than 200 cities. Recommend it for both new construction and remodeling... for any type commercial, institutional or residential building. Wherever one-hour fire resistance is required, Firestop Bestwall is one of the most effective building materials that can be used. Ask your Certain-teed representative for complete information, or write direct now.



Quality made Certain ... Satisfaction Guaranteed



CERTAIN-TEED PRODUCTS CORPORATION

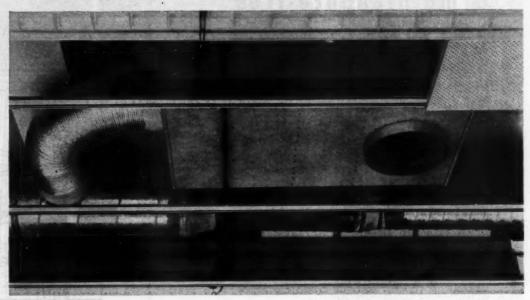
ARDMORE, PENNSYLVANIA

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ASPHALT ROOFING • SHINGLES • SIDING • ASBESTOS CEMENT ROOFING AND SIDING SHINGLES GYPSUM PLASTER • LATH • WALLBOARD • SHEATHING • ROOF DECKS FIBERGLAS BUILDING INSULATION • ROOF INSULATION • SIDING CUSHION



UNION CENTRAL Annex Building, Cincinnati, utilizes some 200 Kno-Draft High Pressure Air Diffusers for quiet, draftless, comfortable air distribution.



BEHIND THE SCENES photo shows typically compact Kno-Draft single-duct system. Note flexible connectors. Outlets at same level as ducts explain why...

High Pressure Saves Space

Space saving, of course, is only one advantage of high pressure air transmission. But it's important. High building costs make it worth while to reduce space allotted to air ducts; and in existing structures, small high pressure ducts have permitted central system air conditioning where space limitations prohibited conventional designs.

Additional advantages of Kno-Draft high pressure systems are: (1) flexibility to meet changes in air conditioning requirements without modifying the system, and (2) individual room temperature control from central station systems.

Kno-Draft High Pressure Air Diffusers are especially designed to handle air at branch duct velocities up to 3,000 feet per minute. Outlets are equipped with dampers and sound traps to eliminate noise. System provides even temperatures throughout the area without drafts,

For a full description of Kno-Draft High Pressure Air Diffusers and layouts for typical systems, read the Connor textbook on the subject. Write on your letterhead for a copy of Bulletin K33. Connor Engineering Corporation, Dept. E-55, Danbury, Connecticut.



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As modern as tomorrow . . . the gleaming, durable surface and structural strength of porcelain enamel . . . and Avoncraft is the finest architectural porcelain enamel ever offered to the architect. The uses of this new and remarkable product are so varied that the architectural possibilities are virtually limitless . . . schools, motels and cabañas, service stations, commercial and industrial structures of many types adapt readily to porcelain enamel design. Load-Bearing Walls provide inner finished walls, structural ribs and insulation space . . . Load-Span Decking provides high safety factor over long unsupported areas, smooth ceilings and insulated roof . . . Curtain Walls are engineered for flexibility of architectural design.

Write today...learn how Avoncraft can fill your specific requirements better!



2,200 GUTH TROFFERS CREATE AN "ACRE OF LIGHT" AT LOVEMAN'S

Shoppers are greeted by a store full of lighting that says "come in and buy" as they enter Loveman's Department Store, Montgomery, Alabama.

Nicknamed "an acre of light", this beautiful new store has over 86,000 sq. ft. of sales area. Every inch is efficiently lighted by 2,200 Guth Recessed Troffers and 265 Guth Tile-Lites. Tile-Lites were used between fixtures and at row ends for added interest in the long lines of light.

This striking troffer installation looks as if it were custom-made for Loveman's. The fixtures blend harmoniously with the modern decor. Gleaming snap-on trim hides flange screws and "teebar gap" for a distinctive, tailored appearance. The effect of "arrowstraight lines of light" was made possible by the precision alignment of the troffers.

In a job this size, installation work is a big factor. According to the electrical contractor, this "acre of light" was... a breeze... one man could have handled it! The fixtures arrived in complete units...ready to mount. They

fitted the "tile-wide" openings perfectly.

The troffers, with 35° x 30° metal eggcrate shielding provide 40 F. C. halfway between rows. Readings were taken at 34" above the floor.

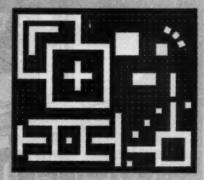
Another factor in the choice of Guth Troffers was maintenance economy. They have hinged shield frames for easy relamping or cleaning. Slide-in reflectors are simple to remove. Electrical apparatus may be replaced without taking troffers down.

Loveman officials give a great deal of credit to Guth Lighting for making their store a pleasant place to work, to shop...and to make profits!

Loveman's is part of the new Normandale Shopping Center—33 shops and stores, all lighted with Guth Troffers. It was developed by Aronov Realty Co., Inc.; Architect, Sherlock, Smith & Adams; Electrical Engineer, J. L. Phillips; Electrical Contractor, Long & McGhee Elec. Co.; General Contractor, Jehle Brothers, Inc.; Distributor, Noland Company, Inc.



LITE-BLOX TROFFERS for sparkling lines of efficient light in any office or store (See Loveman Article at left)



The most complete troffer line —

2 x 2's, 2 x 4's, 4 x 4's for unlimited pattern planning.

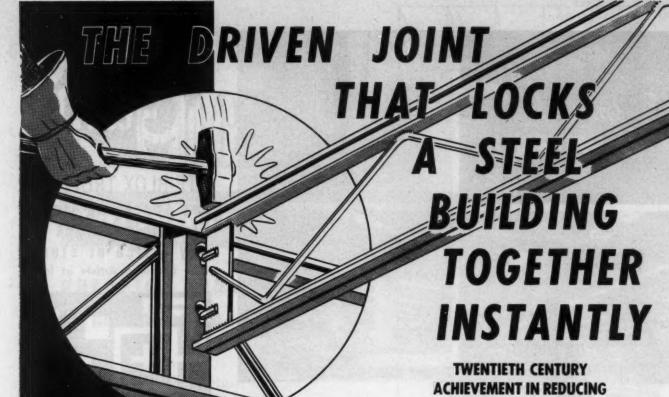
All types of shields from GrateLite* Louver-Diffuser to the new Paraflector and "Ro-Lo-B" Louvers.

WRITE ON YOUR LETTERHEAD TODAY FOR BIG NEW GUTH TROFFER CATALOG 50-J! FREE!

THE EDWIN F. GUTH CO. ST. LOUIS 3, MO.



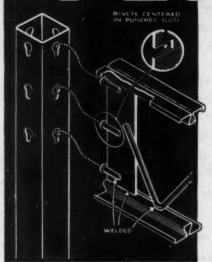
TRUSTED name in lighting since 1902
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STEEL FRAMING

CONSTRUCTION TIME



V-LOK is Macomber's contribution to the men who design, to the general contractors who build and to the owners who want earlier occupancy in a steel framed building.

The driven joint—eliminating bolting, riveting and welding from the erector's job—builds ruggedness into a steel frame—locking it into a rigid structural unit in a very few days instead of weeks.

V-LOK simplifies the designing job — meets the load and span requirements of schools, commercial and industrial work and joins readily with all collateral materials.

If you have a school job—see what V-LOK will do to your costs per square foot. A framing system that puts you ahead of schedule in a one-trip erection job!

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LEADS IN BALLAST DESIGN





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Improved Series - Sequence slimline lamp ballast design created by Advance engineers.

Advance Series-Sequence design becomes standard for the lighting industry.

Advance Lead-Lag design recognized as lighting industry standard.

Origination by Advance of revolutionary 96-T-12 Rapid Start lamp ballast. More compact...lighter in weight... maximum efficiency.

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Specifying Lowell — the *complete* line of "ear-level" sound equipment — is your assurance that sound distribution installations will give eminent satisfaction for countless years to come.

-And Only Lowell Offers:

One source for one complete line. Over 100 models of:

• Ceiling Baffles • Wall Baffles • Speaker Grilles • Speaker Enclosures • Mounting Accessories • Intercom Systems • Combination Speaker Baffle and Circline Fluorescent Light Fixtures.

Leader in the field, Lowell "ear-level" sound equipment has proved superior for use in new and existing construction in more large installations (schools, hospitals, airports, railroad stations and factories) than any other make. All Lowell equipment is designed for easy installation and comes complete with full instructions and mounting instructions.

Lowell High Ceiling Type Baffle with "Floating Conical Action"

Lowell SR Series Chandelier Type Baffles (illustrated above) are especially designed for high ceiling areas, such as churches, auditoriums, railway stations and air terminals, where echo, reverberation and feedback are problems. Lowell "Floating Conical Action" assures uniform, controlled 360° sound dispersion. Diffusing cone supported through rubber grommets by ½" formed aluminum rods, eliminating metallic resonance. Available for 7" to 12" speakers in natural satin finish or a variety of colored lacquers. Constructed of 18 gauge aluminum.



Lowell LCB Bi-Directional Speaker Baffle

Corridor or wall speaker installations give superior performance. Baffle directs clear, undistorted "ear-level" sound in a concentrated beam along the hall. Heavily loaded housing reduces feedback and eliminates metallic resonance. Made of 18 gauge spun aluminum with fine mesh metal grille. Three models for 5" to 8" speakers.

Complete information regarding Lowell — world's largest-used line of sound installation equipment — will be sent immediately upon request.





3030 LACLEDE STATION ROAD, ST. LOUIS 17, MISSOURI
In Canada: Atlas Radio Corp., 560 King Street West, Toronto, Ontario

R/C DUCT FLOORS provide complete electrical flexibility...



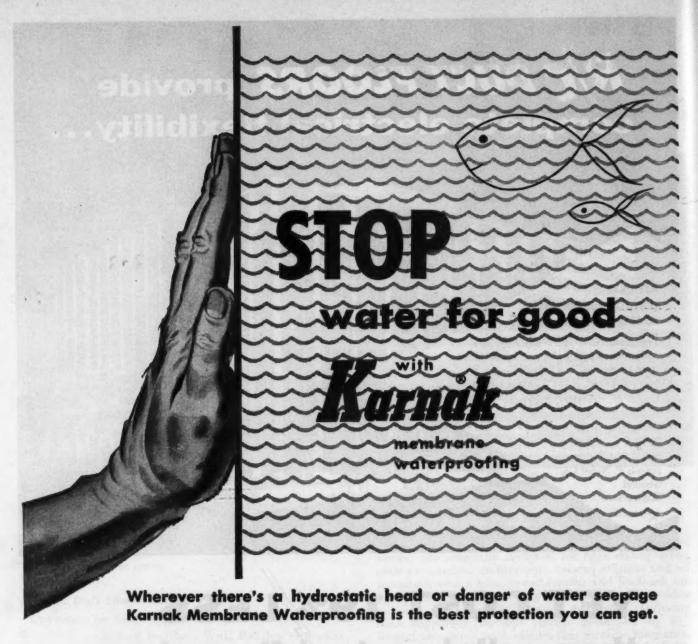
YET COST 19% LESS than cellular steel floors!

To provide complete flexibility of office space, the new NEA Building is being equipped with movable partitions...plus R/C Duct Floors. These are standard concrete joist floors with a system of electrical distribution ducts buried in the structural slab. No special "fill" is required. Ducts are placed on centers of about 7'. Electrical outlets for power, telephone, and intercommunication systems can be connected every two feet, if desired, in a matter of minutes.

R/C Duct Floors resulted in an estimated saving of 19%—60c per sq. ft,—over cellular steel floors. R/C Duct Floors also eliminated the need for additional fireproofing and saved 6" in height per floor!

Write for new 16-page bulletin.







Karnak membrane fabric is saturated so that it is nonsticking and unrolls easily... to the very end. There is no waste. It "works" faster, lays on wrinkle-free...saves labor cost on the job. Open mesh, long-fiber-cotton cloth, saturated with specially prepared asphalt so as to leave the mesh open, is layered on the job with alternate moppings of highly refined, ductile asphalt. The open mesh allows the mopping asphalt to penetrate and interlock the layers. This provides a firm, mechanical bond that resists abrasions, settling and cracking thus maintaining water resistance through the life of the structure.

The layering of fabric and asphalt is the only method of waterproofing that insures proper thickness of asphalt throughout the application. For normal application with hydrostatic head up to 15 feet, two plies of fabric are sufficient; hydrostatic head of 15 to 20 feet takes three plies; four plies are sufficient to waterproof any class of work regardless of hydrostatic head.

Whatever your waterproofing problem, Karnak will prove best. Bridges, buildings, tunnels, retaining walls, viaducts, swimming pools, all need and use Karnak. The Merchandising Mart, Chicago, Ill., used Karnak over twentyfive years ago...the Fairless Works of U.S. Steel used it last year. Specify Karnak on your next waterproofing job.



Karnåk

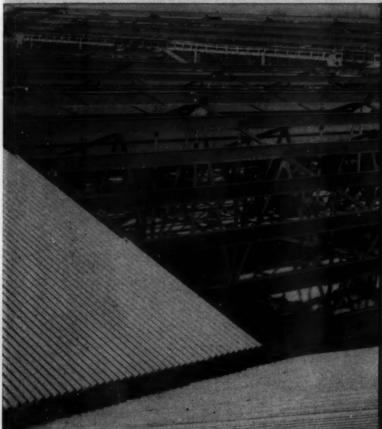


manufactured by
Lewis Asphalt Engineering Corp., 30 Church St., New York 7, N.Y.

Asphalt Roof Coatings and Cements • Caulking Compounds • Asphalt Emulsions • Tile Cement Asphalt Paint • Wood Block Mastic • Joint Filler • Aluminum Asphalt Roof Coating

C L. A. E. Corp.

BUILDERS BEAT A DEADLINE WITH J&L JUNIOR BEAMS



2400 tons of steel structurals, including over 500 tons of J&L Junior Beams, in 75 days . . . that was the "unusual" erection schedule laid down for the new automatic transmission building of Borg-Warner Corporation's Marvel-Schebler Products Division. And the schedule was met with a few days to spare!

The men on the job give lightweight Junior Beam roof purlins a big share of the credit for this outstanding accomplishment. Here are just some of their reports.

"The time for delivery of steel . . . was the essence of the contract. We chose J&L Junior Beams because of their availability, simple fabrication and ease of erection."

H. E. Wray, Assistant General Manager Indiana Bridge Company

"We could never have met the schedule that was laid down without these J&L Junior Beams. They have a wider seating area and double footings which gave our workmen a safer, faster area of moving around aloft. If we had used the usual channels, we would have had to slow down for safety's sake. We would have had foot room on only one side of the bottom of the channels, compared with a place on either side for a man to get foot support on the beams."

CECIL STODGHILL, Construction Superintendent INDIANA BRIDGE COMPANY

Jones 4 Laughlin
STEEL CORPORATION - Pittsburgh





Marvel-Schebler Products Division
Borg-Warner Corporation
Automatic Transmission Department
Building

Decatur, Illinois

Engineers-

Alfred Benesch & Associates, Chicago

Structural Steel Fabricator—

Indiana Bridge Company, Muncie, Ind.

J. L. Simmons Co., Inc., Decatur, Illinois



Take a tip from the men that are using them, J&L lightweight Junior Beams can help you cut building costs. Experience shows that J&L Junior Beams are the most economical hot rolled purlin sections available. They're adaptable, easy to install, rigid and vibration resistant.

Write today for more information on this modern lightweight J&L structural.

☐ Please send me a free copy of your book on J&L Junior Beams. ☐ Please send me comparative cost figures purlin sections. Name Comparative cost figures of the cost of the			r, Pittsburgh	
	on J&I	Junior Bed	ams.	
Company	Company			

JUNIOR BEAMS ARE READILY AVAILABLE FOR PROMPT DELIVERY

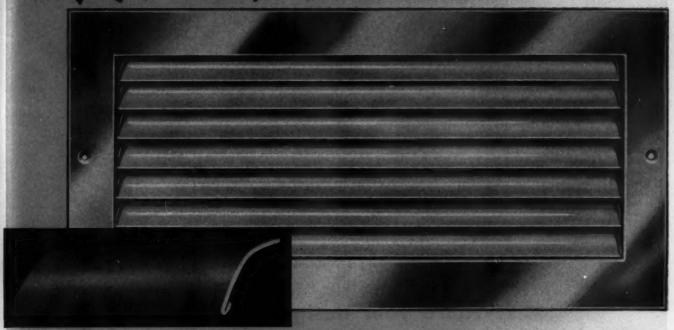
New Pittco No. 90 awning Bar





PITTSBURGH INDUSTRIES LIMITED

Return Air Grille



CURVED HEMMED FINS GIVE 80% FREE AREA

designed by

Large free area means the Titus Return Air Grilles HANDLE MORE AIR PER SQUARE INCH. Makes it possible for a smaller grille to give superior performance...at lowest cost...and correct performance faults of other parts of an air conditioning or heating system...at the same time.

NEW BEAUTY

Matches design of supply grilles Curved outline of fins add beauty . . . at the same time make it easy for maintenance personnel to keep grilles clean.

ONE-PIECE ASSEMBLY... FOR ANY SIZE OPENING

This eliminates expensive labor of handling old-fashioned grilles that are made in sections. Cuts costs of fitting, butting and screwing together these sections. Brings labor and grille costs to a minimum.

MORE STRENGTH PER SQUARE INCH

The curved hemmed fin design adds rigidity and durability to resist lower wall abuse. There is no see-thru due to the special positioning of the fins.

TITUS

WRITE FOR FREE CATALOG TODAY

TITUS MANUFACTURING CORP. WATERLOO, IOWA

Gentlemen: I wish to improve the heating and air conditioning performance of my forced air systems... at the same time lower my grille costs. Please send me the new illustrated brochure on Titus Return Air Grilles.



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Company

Addres

City

State



First Presbyterian Church South Bend, Indiana Architect: Harold Wager Philadelphia, Pennsylvania Contractor: Sollitt Construction Co. South Bend, Indiana

PROGRESSIVE VIEW of First Presbyterian Church, South Bend, Indiana. Contractor Ralph Sollitt reports: "Duraplastic gave us a more plastic, workable mix...less segregation and easier placement."

Where your design calls for concrete . . . specify DURAPLASTIC* cement

Yet Duraplastic costs no more

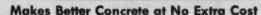
... Sells for the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For more information and a descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Ave., New York 17, N. Y. Where your design calls for concrete, it pays to consider the advantages of Atlas Duraplastic air-entraining portland cement. This superior cement is recognized throughout the building field as an aid to rapid, efficient construction and attractive, durable results.

Contractors report that Atlas Duraplastic improves surface appearance-aids proper placement of concrete in forms and around reinforcements. That's because Duraplastic-made mixes are more workable. They hold together better and require less mixing water for a given slump.

Builders like the way Atlas Duraplastic minimizes water gain and segregation . . . gives finished concrete greater durability and increases its resistance to freezing-thawing weather.

OFFICES: Albany, Birmingham, Boston, Chicago, Dayton, Kansus City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco. *"Duraplastic" is the registered trade-mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company.



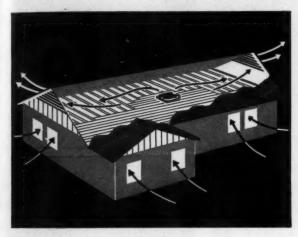


UNITED STATES STEEL HOUR—Televised alternate weeks—See your newspaper for time and station



Cool your homes at minimum cost

Home buyers are seeking cool comfort



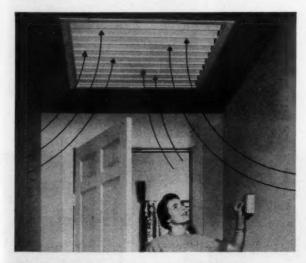
Cool breezes in every room

This inexpensive home cooling system fills the entire home with refreshing air on hottest summer nights. It pulls in fresh outside breezes . . . drives out hot, sultry air. Room temperatures drop 10 to 20°, bringing cool comfort to occupants.



Easily installed in any home

The new Hunter is the simplest of all attic fans to install in any home, old or new. Designed for quiet, trouble-free performance, it will cool any home for many years. Certified air deliveries range from 5000 to 16000 cubic feet per minute.



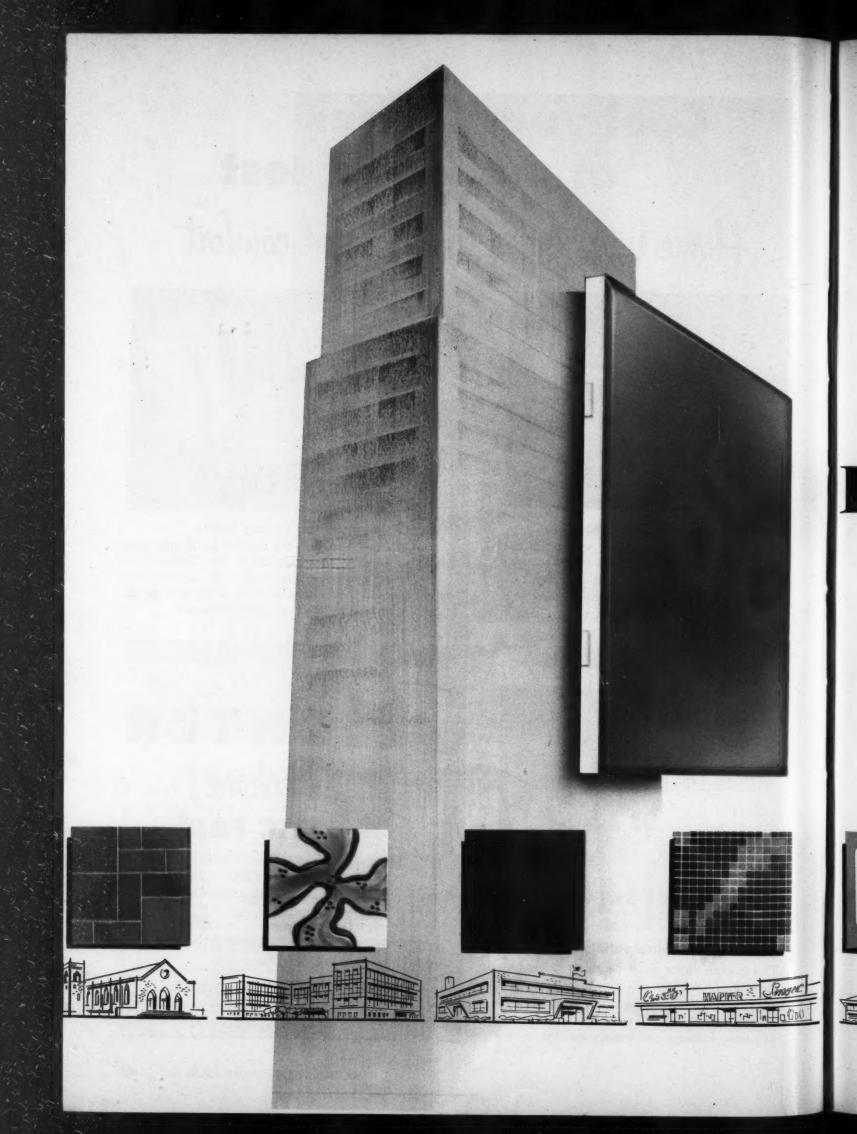
Hunter's new automatic shutter

This modern ceiling shutter opens or closes automatically at the flip of a switch, or with automatic timer. Finished in neutral shade of baked enamel, it blends with all room colors. Shutter will fit narrow hallways, and is easily installed.

HUNTER Package ATTIC FAN

Mail coupon for 1955 Hunter Catalog and copy of "Cool Every Home with a Hunter Attic Fan."

Hunter Fan and 396 S. Front St.,	Ventilating Co. Memphis 2, Tenn.	
Send complete d	ata to:	
NAME .	*	
ADDRESS		
CITY	STATE	
See ou	r Catalog in Sweet's File	



The only complete ceramic tile line...

OSAIC

from America's largest ceramic tile manufacturer!

Know... and work with .













You'll want complete data on the complete Mosaic tile line. Ask your Mosaic Representative, or write us at Dept. 30-27, Zanesville, for these new Mosaic tile books: (A) The Mosaic Clay Tile Workbook for Architects; (B)

The Mosaic Tile Book of Beautiful Homes; (C) The Mosaic Products Catalog. **FACTORIES:** Zanesville and Ironton: Ohio, Matawan, N. J.: Little Rock, Ark., Corona and El Segundo, Calif. OFFICES: Atlanta. Baltimore, Boston, Buffalo, Chicago, Dallas, Denver, Detroit, Fresno, Greensboro, Hartford, Hemp-







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Washington, D. C.

Member: Tile Council of America and the Producers' Council, Inc. Over 5000 Tile Contractors to serve you.

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Let

How's this old-time gadget for air conditioning service! If you need advice on your clients' air conditioning problems, you can get specialized assistance from Airtemp.

help you!

Airtemp can guide you in planning your commercial and industrial air conditioning

You Get Guidance of Top Engineers

Your needs get individual attention. Airtemp Construction Corporation, subsidiary of Chrysler Corporation, brings you the advisory service of engineering specialists.

You Choose from a Full Line of Equipment
You can select your individual system from the complete Airtemp line. Airtemp offers every type of modern, precision-built air conditioning equipment-conventional or specially-engineered-for a room or a building.

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You can depend on local Airtemp service in the years to come. Trained personnel and facilities throughout the nation guarantee satisfaction.

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You save money on Airtemp's low installation costs, low operating costs. Extra economy like this results from Airtemp's efficient design and operation.

Write for Full Information

For complete details on how Airtemp can be of service to you, write to: Airtemp Division, Chrysler Corporation, Dept. AR-5-55, Dayton 1, Ohio.

AIRTEMP SERVES ALL AMERICA

\$0UTHWEST AMERI-CAN PUBLISHING COM-PANY, Ft. Smith, Arkansas. Contract-or: Harry G. Barr Company.

STUART INVESTMENT BUILD-ING, Lincoln, Nebraska. Contractor: Sidles Com-pany. Built in 1937.

WAYERLY GROWERS CO-OPERATIVE, Waverly, Florida. Contractor: H. N. Webster, Sebring, Florida. Built in 1947.







AIR CONDITIONING . HEATING FOR HOMES,



• FIRST in the Prudential Building ... Los Angeles

Now In the Prudential Building Chicago

There Must Be A Reason For



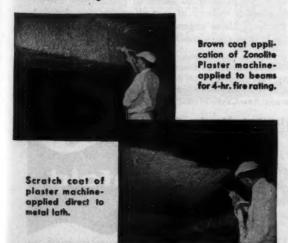
ZONOLITE® Time- PLAST

Zonolite Plaster has stood the test of time in buildings built over 20 years ago. It has been proved reliable.

- Zonolite Plaster saves tons and tons of dead-
- Zonolite Plaster affords highest attainable fire ratings for floors, ceilings, columns, beams.
- Zonolite Plaster gives added insulation value.
- Zonolite Plaster will help you cut building time and costs.

Revolutionary Placing Methods

Plaster fireproofing applied by machine in Chicago's new Prudential Building.



Time Tells The Story

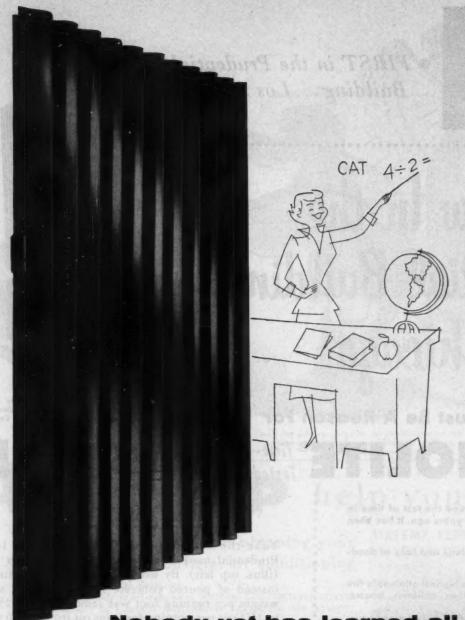
Take the Prudential story, for example. In 1948, Prudential used Zonolite in its Los Angeles building (illus. top left). By using Zonolite vermiculite Plaster instead of poured concrete for fireproofing steel, the weight per running foot was reduced from 225 pounds to 25! Cost per running foot was cut from \$4.70 to \$3.00. Zonolite saved weight; saved money, too. And earned the highest attainable fire rating!

No wonder Zonolite Plaster fireproofing is being used in Prudential's new Chicago building. Year after year, time-tested Zonolite Plaster has proved its worth in major buildings everywhere. A recent check of a group of blue ribbon buildings (some constructed over 20 years ago) shows the original plaster in A-1 condition.

Yes, there's a reason why America's leading building teams look to ZONOLITE, the time-tested lightweight champion!

"Systems of Light-weight Construction" with latest published information on

	npany, 135 S. LaSaile St. Chicago 3, III.
Please send a G-66, "Syste with full der Plaster.	ne without obligation new booklet, ems of Lightweight Construction" tails about time-tested Zonolite
Name	
Firm	
Address	
Class	Zone State



Nobody yet has learned <u>all</u> the ways Modernfold makes space flexible

From grade schools to colleges, from workshops to factories, space in today's buildings can be as fluid and versatile as an architect desires...for MODERNFOLD doors and walls have given design a new flexibility, as exciting as it is practical.

Space requirements which change hourly or daily can be met quickly and easily. And space needs which are likely to change months or years in the future need not require expensive, time-consuming remodeling if MODERNFOLD doors and walls have been installed with growth in mind.

MODERNFOLD doors are available in two lines: Custom, which comes in any size and a multitude of colors, and Spacemaster, which fits standard-size door openings and can be painted or slip covered.

In any size, Modernfold doors assure an almost unlimited life of efficiency and service because of their balanced, double-strength steel framework. And their washable vinyl covering has to meet the most rigid specifications in the industry for flexibility, resistance to cold, abrasion resistance and flex resistance.

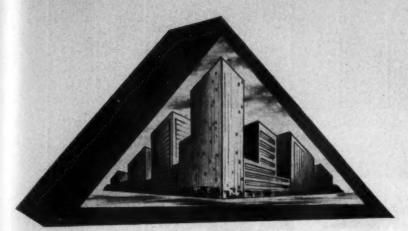
Switches and overhead tracks make it possible for one Modernfold Custom door to serve in more than one location...to meet a variety of fast-changing demands for space. In fact, there's just no limit to the ways Modernfold makes space more flexible.

If you have a problem in space division, the MODERNFOLD distributor (listed under "Doors" in classified directories) will be glad to show you the Custom line. Your building supply dealer has the Spacemaster line available. Or write New Castle Products, Inc., Dept. E30, New Castle, Indiana. In Canada: New Castle Products, Ltd., Montreal 6.

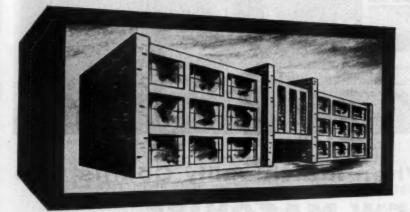
Full details in Sweet's file



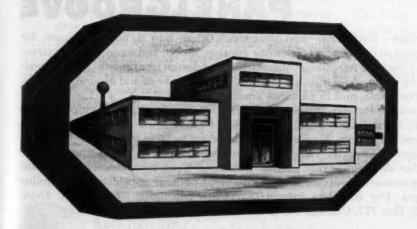
JOHNSON Automatic Temperature CONTROL



OFFICES, STORES, PUBLIC BUILDINGS



SCHOOLS, HOSPITALS, INSTITUTIONS



INDUSTRIAL BUILDINGS



Every building presents a different temperature control problem. So does its heating, cooling, ventilating or air conditioning system. That is why architects and engineers, seeking to insure the *finest* in control for their buildings, turn their temperature regulation problems over to Johnson.

The nationwide Johnson organization originated the idea that temperature control systems must be specially designed according to the requirements of the particular building and its heating, ventilating or air conditioning installation. For over 70 years, Johnson has manufactured automatic temperature control apparatus and, beyond that, has planned and installed every one of its systems to fit the exact needs of the individual building.

This undivided interest in and responsibility for the entire sequence of operations results in temperature control systems that are unsurpassed for efficiency, economy, comfort and convenience.

Any building—small or large, new or existing—can enjoy the benefits of Johnson Control. Why don't you take advantage of Johnson's unmatched experience on your next job and be sure of getting the finest in control? The recommendations of an engineer from a nearby Johnson branch are yours without obligation. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

JOHNSON, CONTROL

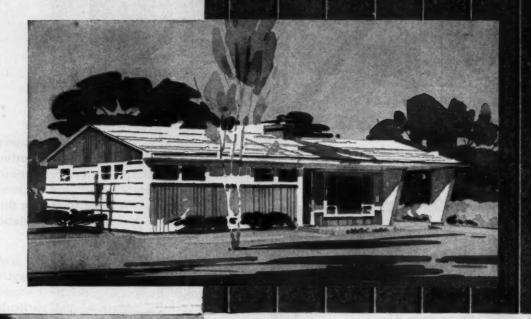
PLANNING

MANUFACTURING

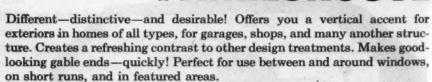
INSTALLING

SINCE 1885

It's different







Masonite Panelgroove needs no joint treatment...edges are shiplapped to create a continuous pattern. Square-cut grooves are $\frac{3}{8}$ " wide and $\frac{4}{8}$ " on centers. Panels are $\frac{4}{8}$ " wide, $\frac{5}{8}$ " thick and up to $\frac{16}{8}$ long.

When you specify Panelgroove, you will be assuring your client all the weather-defying advantages of Masonite Tempered Presdwood®—plus a continuous high-styled design with great popular appeal. Sold by lumber dealers. For complete information write Masonite Corporation, Dept. AR-5, Box 777, Chicago 90, Illinois.

Ideal for the game room, recreation room, den, study or modern living room. Panelgroove goes up quickly, takes and holds any surface finish, resists all kinds of bumps, scrapes and surface hazards. Use Panelgroove for interesting, serviceable walls in public rooms, too.

Look For This Man

He Makes The Difference

MASONITE PANELGROOVE

TEMPERED PRODUCT OF MASONITE® CORPORATION

Not immediately available west of the Rockies

Those who really know say:

CERTIFIED BALLASTS

qive best results!

• No one knows better the value of CERTIFIED CBM BALLASTS than the manufacturers of fluorescent tubes. For the satisfactory performance of their lamps is vitally dependent on the ballasts that operate them. They know CERTIFIED CBM BALLASTS are Tailored to the Tube.

CHAMPION says:

"Fluorescent lamps are designed to operate at specific electrical values. The use of auxiliary equipment that has been proven to meet these agreed upon standards will assure the user maximum value for his lighting dollar with a minimum of operational failures. Certified Ballasts are inexpensive insurance."

GENERAL ELECTRIC says:

"The life and light output ratings of fluorescent lamps are based on their use with ballasts providing proper operating characteristics. Ballasts that do not provide proper electrical values may substantially reduce either lamp life or light output, or both. Ballasts certified as built to the specifications adopted by the Certified Ballast Manufacturers (CBM) do provide values that meet or exceed minimum requirements. This certification assures the lamp user, without individual testing, that lamps will operate at values close to their ratings."

SYLVANIA says:

"The light and life ratings of fluorescent lamps are based on three hour burning cycles under specified conditions and with ballasts meeting American Standards Association specifications. Ballasts marked with the CBM emblem and certified by Electrical Testing Laboratories, Inc., meet ASA specifications."

WESTINGHOUSE says:

"Use ballasts that are tested and Certified by Electrical Testing Laboratories or ones that are otherwise known to meet the specifications of the lamp manufacturer. These will give best results with Westinghouse fluorescent lamps."

That's why CERTIFIED CBM BALLASTS merit the slogan—Tailored to the Tube.

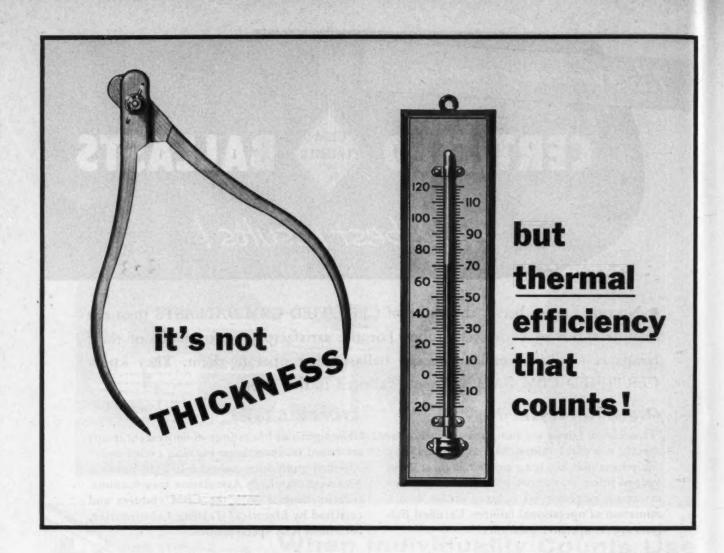
Certified CBM Ballasts are built to assure quiet operation and long trouble-free life.



ERTIFIED BALLAST MANUFACTURERS

Makers of Certified Ballasts for Fluorescent Lighting

2116 KEITH BLDG., CLEVELAND 15, OHIO



that's why more architects specify **Fiberglas** than any other roof insulation

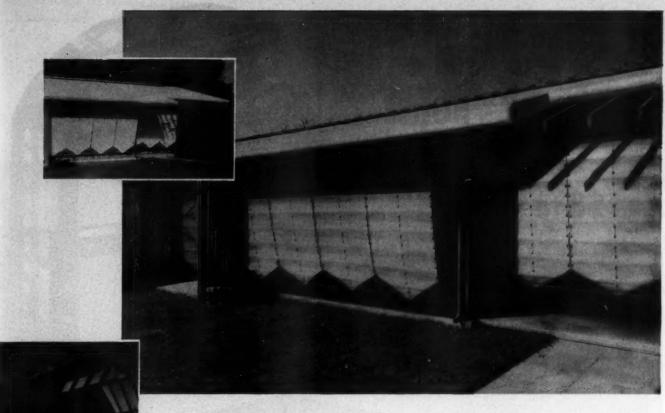
Once upon a time it was the practice of architects to specify roof insulation by thickness. Today, this practice is obsolete because 3/4-inch of Fiberglas* does the same insulating job as a full inch of most other materials. And in addition to its exceptionally low "k" factor, Fiberglas Roof Insulation is dimensionally stable, rot proof, moisture resistant. It has sufficient resilience to withstand normal traffic loads. Its light weight and easy workability also save time and labor costs. For complete technical data, see our listing in Sweet's File, or write either to one of the distributors listed below, or to Owens-Corning Fiberglas Corporation, Dept. 68-E, Toledo 1, Ohio.



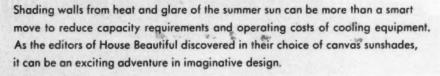
Distributed East







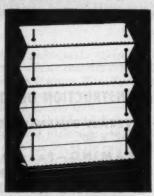
Canvas solves the sun problem in



The problem here was how to shade east walls under a roof overhang that provided little or no protection from the early morning sun. By 8 A.M., even in late summer, the outside of these walls was too hot to touch. Such a crucial source of heat intake can mean trouble for the occupants, with or without air conditioning. With custom-designed white canvas sunshades, the whole wall of wide glass areas is provided with complete protection and the ability to reflect away heat.

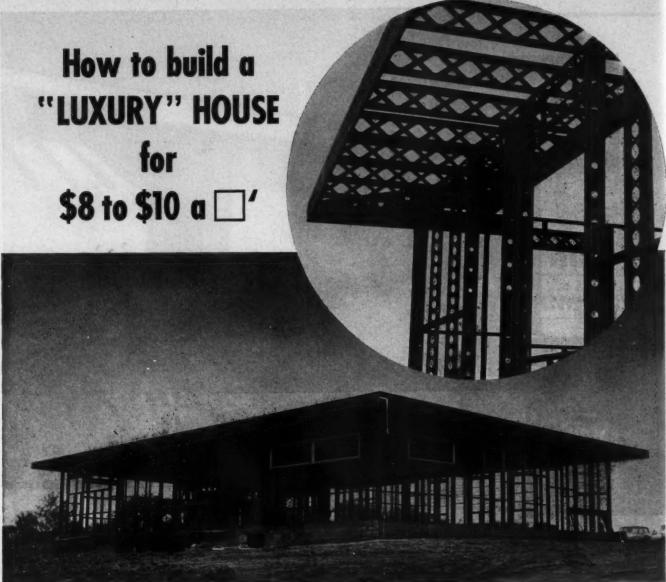
Because of its easy flexibility, its simplicity of fabrication, and its smart appearance, you'll find canvas the best solution to your sun problems. Talk over your design ideas with the canvas goods manufacturer in your locality. He'll gladly discuss specifications and costs without obligation. Look for him listed under "Awnings" in the yellow pages of your phone book.

See our catalog 18f/Ca in Sweet's Architectural File or write for a free copy. It contains original and practical ideas, plus helpful instructions for specifying canvas.



Each lightweight panel has horizontally-stitched pleats that enables it to be drawn up into a neat package of four or five inches for integration under the overhang.





Framing for new home of Lewis R. Berry at Hanover, New Jersey

PM-58

Here is a seven-room, two-bath, ranchstyle house, photographed during erection. The completed structure, which is top quality throughout, cost less than \$23,000 to build.

The "key" to this low-cost luxury house is Penmetal LIGHTSTEEL structural sections. These sections are scientifically engineered for easy fabrication and erection. That is why you save in construction costs.

Joists, studs, track and bridging are designed to fit together for ease of assembly and welding in the shop or at the job site. Because of the light weight of the sections, complete wall units can be readily trucked to the job site where they can be erected in a few minutes. Precisely engineered openings in sections reduce cost of installing wiring

and plumbing. These openings are also used for tying metal lath to the sections.

The finished house is firesafe, termite proof and virtually maintenance free.

LIGHTSTEEL houses are not mass produced; they are built to your own drawings and specifications. For further information, send for new 16-page illustrated catalog.

PENN METAL COMPANY, INC.

General Sales Office: 205 East 42nd Street, New York 17, N. Y. Plant: Parkersburg, W. Va.



CONSTRUCTION DETAILS

OVERALL DIMENSIONS— 62' x 36'.

FRAMING — Penmetal LIGHTSTEEL structural sections.

EXTERIOR WALL CON-STRUCTION—%" rib lath covered by two coats of Portland cement, and a finish coat of Oriental stucco.

INTERIOR WALL CON-STRUCTION—Plaster over %" rib lath.

INSULATION — 2½" cavity between interior and exterior walls filled with asphalt emulsion containing fiberglass and asbestos.







From the first rough sketches . . .

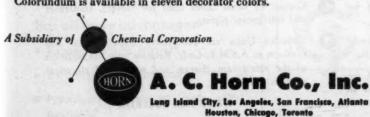
Frank Lloyd Wright specified Colorundum floors for their warmth of color and beauty."

"Look at these photographs of our exciting new home and you can see why we just wouldn't consider drab, colorless concrete. From the first rough sketches," writes Mrs. Zimmerman, "we planned attractive, luxurious Colorundum for the patio and the service areas . . . especially when we found out how little it cost!"

Colorundum is the ideal solution to the problem of exposed or uncarpeted areas of plain concrete. It provides colorful, wear-resistant floors at just a fraction of the cost of tile.

Colorundum is far more resistant to traffic than ordinary concrete floors. It is a balanced formulation of nonslip aggregate (next to the diamond in hardness), water-repellent compounds, and durable colors ... contains no silica, quartz, metal or sand. It is easy to keep clean, and since it contains no metal, it will not rust or stain.

Colorundum is available in eleven decorator colors.



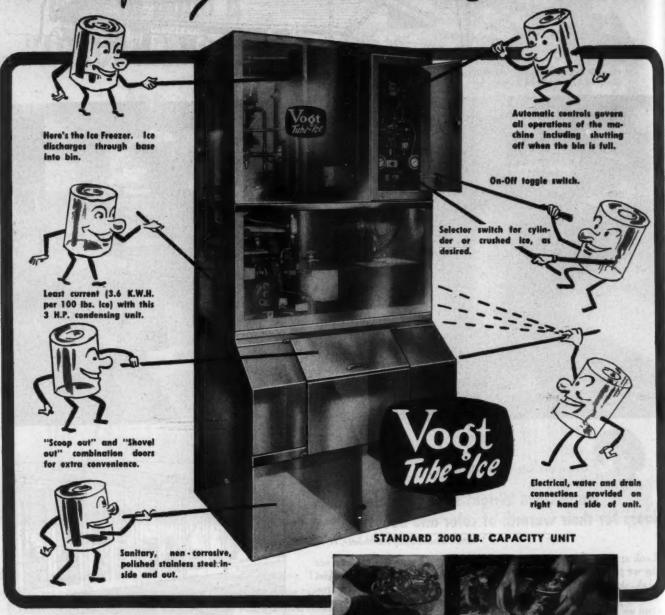
into the concrete topping and becomes an integral part of the surface, producing beauty and durability.

Fused color. Not a paint or coating! Colorundum is troweled

A. C. H	orn Co., Inc.
Dept. H1:	2-515, 10th St. & 44th Ave., Long Island City 1, N. Y.
	☐ Please send me complete information on COLORUNDUM.
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Here's inside information on the finest Ice making unit ever made



OPERATION OF THE MACHINE

- Single toggle switch controls starting and stopping of unit. Ice discharges through base of freezer to patented ice sizing cutter.
- A three-position selector switch provides automatic control of ice making unit to produce and store cylinder and crushed Tube-Ice consecutively (requiring two ice bin thermostats) or either type of ice
- Automatic blowdown in water pan maintains freshness and aids in reduction of concentrated solids.
- An upper "scoop out" for small quantities of ice and a lower "shovel out" door are provided in storage bin.



CYLINDER TUBE-ICE

CRUSHED TUBE-ICE

- Minimum of 3" Fiberglass insulation between storage bin walls. Bin has removable partition if but one type of ice is desired.
- Copper or brass tubes used for freezer, condenser and refrigerant piping.
- Tube-Ice Units are completely self-contained and conform to A.S.M.E. Code. Require only the addition of the refrigerant charge, and water and electrical

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HENRY VOGT MACHINE CO. Louisville 10, Ky.

BRANCH OFFICES: New York, Philadelphia, Chicago, Cleveland, St. Louis, Dallos, Charleston, W. Vu.

Write in the specification that keeps out failure...

CAST IRON SOIL PIPE

When house drainage and sewer lines run under basement floors, under driveways, land-scaping and lawns there are just four words to write into your specs for permanence: Cast Iron Soil Pipe (with lead-locking ring in hub and beaded spigot).

And with the same tried and tested words, you'll guard soil stacks, drainage branches and vent stacks against costly repairs and replacement. Using cast iron, the plumbing drainage system you plan has the same life expectancy as any structure in which it is housed. It's good to specify Cast Iron Soil Pipe from sewer to rooftop.

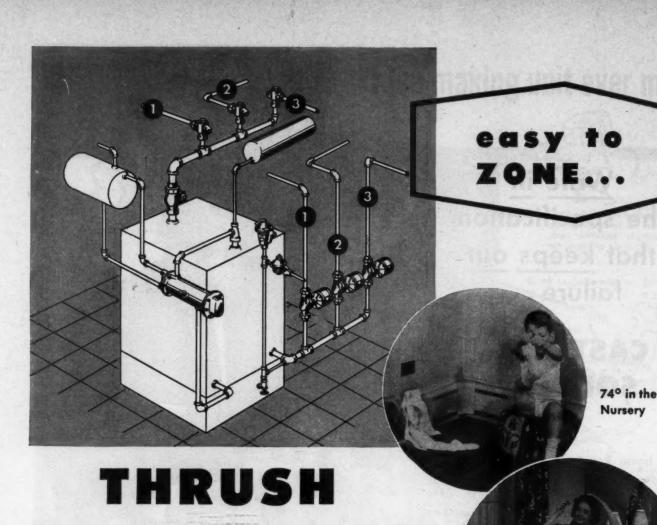


PERMANENT CAST IRON SOIL PIPE

has all these advantages:

- Rugged metallic strength
- Zero moisture absorption
- Permanent tightness of joints, with flexibility
- The only pipe accepted in all codes for use from street to roof

THE MARK OF QUALITY AND PERMANENCE	Dept. AR-5, 1627 K Street, N. W. Washington 6, D. C. Send mecopies of your new 12-page booklet "Best in the Long Run" that shows—with actual photographs and authenticated captions—what can happen to lines that aren't Cast Iron.



Radiant Hot Water Heat

Zoning a Thrush Radiant Water Heating System is simple and inexpensive . . . it's a big feature in selling the home. It increases comfort while reducing fuel bills . . . and the Thrush method of zoning is low in cost. Just three simple units are needed for each zone . . . a Thrush Circulator, Flow Control Valve and Radiant Heat Control. As many zones as may be required can all be supplied from one automatically-fired boiler.

Heat is transmitted only when needed in any zone, without affecting other zones. Here's the ideal heating method for apartments, motels and store buildings as well as homes. Hot water heat is mild, easily controlled, quiet and clean. Any home is a better home with Thrush Radiant Hot Water Heat.

For more information please see our Catalog in Sweets or write Department J-5 today.



65° in the Garage





Thrush Water Circulator

Thrush Flow Control Valve

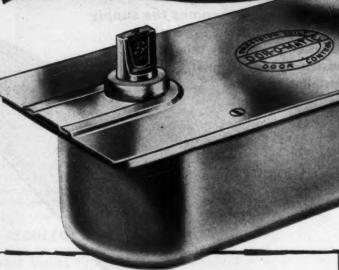






A MODEL FOR EVERY TYPE OF DOOR IN ANY TYPE OF BUILDING





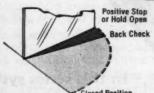


Diagram shows how door is controlled as it opens. Accidental openings are eliminated . . . as are accidental hold-opens. The control also cushions the closing of door.

- BUILT-IN HOLD-OPEN DEVICE
- POSITIVE BACK STOP
- POSITIVE CENTERING
- BUILT-IN LEVELING DEVICE
- NO ACCIDENTAL HOLD-OPEN
 TWO SPEED CLOSING ACTION
- PERMANENT HYDRAULIC OIL SEAL
- POSITIVE UNIFORM CONTROL
- NO SEASONAL ADJUSTMENT
 EASY INSTALLATION

1

Precision-built Dor-O-Matic door controls are at work in thousands of buildings from coast to coast... where they are providing more positive door closing action. There are twenty-five models in all. Each is designed for long service life under all conditions and complete adaptability to contemporary design and function. Only Dor-O-Matic provides all ten of the service advantages listed at left.

Write for Detailed Information and Literature

MADE BY THE BUILDERS OF THE INVISIBLE DOR-MAN



AUTOMATIC DOOR CONTROL

SEE SWEET'S ARCHITECTURAL FILE

17e

DOR-O-MATIC

DIVISION OF

Republic Industries, Inc.
4444 North Knox Avenue • Chicago 30, Illinois

5567

a new major advancement...

Menbitt SERIES HOT WATER

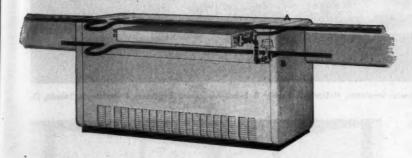
Nesbitt Syncretizers and Wind-o-line may now be combined in a forced hot water heating and ventilating system in which the Wind-o-line tubing becomes the supply and return main to the Syncretizer in a series of classrooms—thus saving on construction, equipment, and installation costs.

Nesbitt Wind-o-line comes in attractive wall-hung enclosure or recessed in storage cabinets of The Nesbitt Package

In this series system
the water temperature
at all times is related to
the outdoor temperature,
thus improving the individual
room temperature control
provided by the Syncretizer, and
the protection against cold surfaces
furnished by the Wind-o-line.

school mechanical system costs reduced classroom comfort and protection increased

WIND-O-LINE SYSTEM



Packaged piping reduces installation cost.

(a) Crossover return tubing, expansion loop, and air vent fitting come pre-assembled and connected to the heating element.

(b) Crossover supply tubing, expansion loop, and balancing valve are furnished installed, leaving a minimum of piping at the site.

F you are interested in school construction costs, it will pay you to study how this latest Nesbitt development meets today's needs and gives more for the school-building dollar.

In forced hot water applications Nesbitt Syncretizer heating and ventilating units with Wind-o-line radiation may be installed in series-loop circuits, in which the copper tubing of the Wind-oline system serves as the only required supply and return piping for multiple-classroom groupings or entire wings.

COSTS REDUCED Savings in equipment: Smaller pipes and pumps are required because the Nesbitt System is designed to provide the needed heating capacity with water quantities of from one half to one third those required in conventional systems. Saves on both first cost and operating cost.

Savings in construction: Wind-o-line supplies Syncretizers, eliminating costly pipe trenches, mains, runouts and pipe covering in much of the building. Other piping is simplified.

Savings in installation: Mains and piping are smaller, shorter, simpler. Packaged piping within the Nesbitt Syncretizer unit ventilator reduces installation labor at the site. See above.

COMFORT INCREASED Variable water temperature control: Relating the available heat directly to outdoor temperatures improves the control of individual room temperature by the Syncretizer.

Improved cold surface protection: Because the system water temperature increases as outside temperature falls, Wind-o-line protection against cold window downdraft and bodily heat loss is continuously related to actual needs.

Off-time temperature maintenance: Without additional investment in equipment, the Nesbitt System maintains safe basic building temperatures during overnight, holiday, week-end shutdowns.

at no extra cost to you:

Nesbitt schoolroom equipment

upgraded

new hardtop sunboard

Durable laminated plastic, resists cracking, chipping, and abrasion. Easy to clean. Available in five decorative colors.

new attractive colors

Nesbitt Syncretizers, Storage Cabinets, Wind-o-line, and Sill-line Radiation are now available in six harmonious colors.

new shallow wall box

A new Nesbitt air intake (2½" deep) is suitable for either prefab panel or masonry walls. Its vertical louvres provide better elimination of air-borne water than wall boxes of conventional design. Shown below.





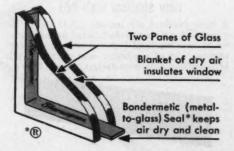
Architects: Stepleton, McDonnell, Barber & Evans Associated Engineers & Architects, Toledo, Os

All windows are large to provide sweeping views of the field and its approaches.

All windows are *Thermopane** insulating glass to reduce the possibility of condensation, to keep down fuel costs by blocking heat loss and to reduce noise. *Thermopane* thus serves as both a thermal and sound insulator.

The outer pane in each *Thermopane* unit is L·O·F Heat Absorbing Plate Glass. This reduces solar energy input in summer, adding to comfort. And it provides greater eye-comfort by reducing sun and sky brightness as well as reflections from runways and aprons.

The Toledo Express Airport is another example of applying special functions of specific modern glass products to provide more efficient, more livable buildings. If you would like performance data on *Thermopane* and on Heat Absorbing Plate Glass, write to Libbey Owens Ford Glass Co., 608 Madison Avenue, Toledo 3, Ohio.





Office of Commissioner of Aviation provides a clear view of loading ramps, field and approaches.

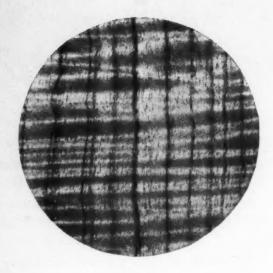


Main concourse is kept bright and cheerful through Daylight Walls of Thermopane. Waiting passengers and visitors enjoy a clear view of outdoors.



Thermopane INSULATING GLASS

a Great Name in Glass





Teak!

FOR WALL PANELING

The King of Woods—you cannot specify a finer, richer, more beautiful paneling than Teak.

We have 325 different grain patterns of rare woods available in our architectural portfolio—the most extensive in the world—including Rosewood, Harewood, English Brown Oak, Satinwood, Butternut.

Include in your design these magnificent veneers. Consult our specialists.

CHESTER B.

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City and Zone		State
	785 Grant Line Road, New Send representative immediately Name Address	NameAddress

SEND FOR FREE CATALOG

Surround Your Customers with the Practical Luxury of

Briggs Beautyware



Statistics show that the bathroom has an ever-increasing influence on the home buyer—the finer the bath facilities, the faster the sale.

Briggs has led the field in providing the building industry with the practical luxury of top quality, truly modern bath fixtures at a realistic price.

And Briggs has set the pace in pioneering new safety, utility and ease of installation features—in the merchandising of color at popular prices—in the promotion of the second bathroom as "The New Standard for American Living."

Read below for additional facts about Briggs leadership in engineering, manufacturing and merchandising. Join the fast growing ranks of home building leaders who surround their customers with the practical luxury of Briggs Beautyware.

BRIGGS MANUFACTURING COMPANY

300 Buhl Building

Detroit 26, Michigan

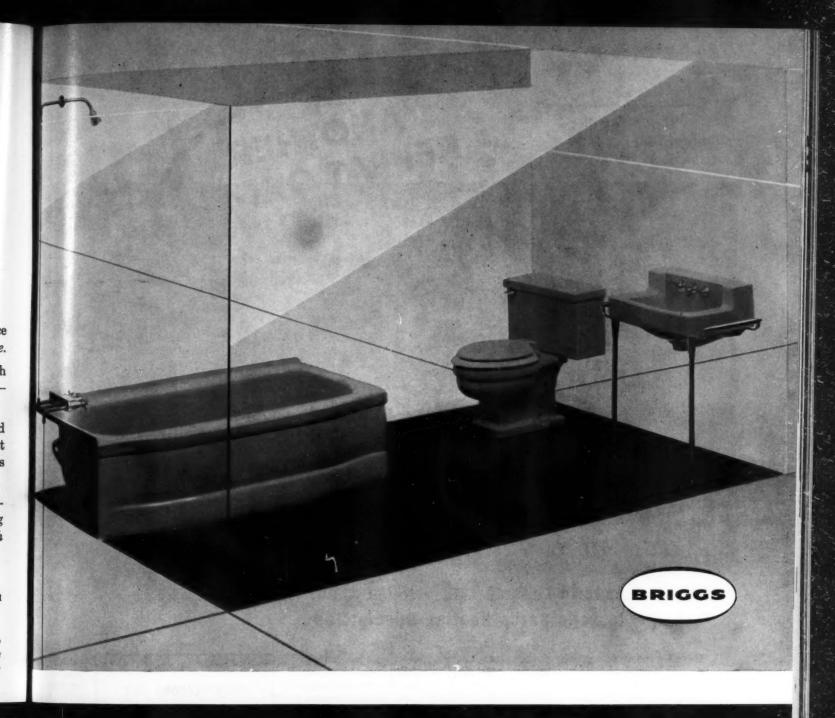
Refer to Sweet's Catalog—Architectural File 24A, Light Construction File 9B, or A.I.A. File 29H. B-701 LaSalle Tub
B-6402 Carlton Closet
B-3250-HS Whittier Lavatory

Delightful distinctive design in fresh, bright colors is yours with Briggs Beautyware—at the cost of many white bath sets. Briggs craftsmen have developed new techniques in forming and finishing that provide new bonus benefits in contour, color and value. With Beautyware, two bathrooms in color can be a practical reality for a big majority of your customers.

Long-lasting quality is inherent in Beautyware design and sum materials. Bathtubs feature the traditional durability of the profinest, heavy-gauge enameling steel, pressure-formed to exacting Brig contours and reinforced with special rigid frame members. It is beauthe surest blend of strength and scientific weight—with exclusive super dividends in easiest handling and installation.

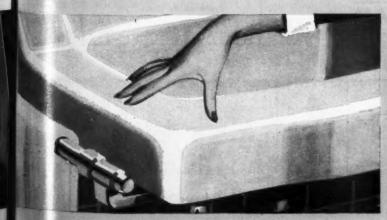


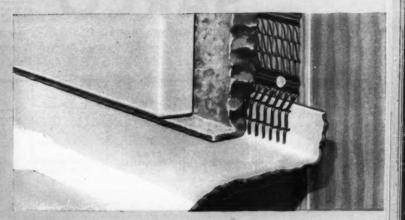




an and Burlaces hard as glass are fused to every Beautyware fixture of the porcelain enamel fused to steel, and high-density vitreous china. Briggs' exclusive pioneering in manufacturing processes for Beautyware bathroom fixtures has brought new achievements in the uper-hard fixture finishes—glistening, easy to clean, and defiant of stains, acids and fading!

Important utility features—such as the square, straight ends and the leak-proof wall flange, found on all Briggs tubs—make Beautyware the most practical as well as the most appealing choice. The architect prefers Beautyware for functional styling, the builder appreciates its practical appeal, the plumber has confidence in Briggs' technical excellence.





The most convincing stamp of user satisfaction





18 years of repeat orders

and now again ...

Lederle Laboratories Division American Cyanamid Co. Installs Sarco Heating Specialties

There's a good reason why Sarco Heating Specialties have been specified and used by Lederle again and

That reason is Sarco dependability.

Leading architects, engineers and contractors know from the long record of repeated user approval that they can depend on Sarco performance.

The Sarco heating specialties now operating in this new office building

and other Lederle Laboratories buildings have been installed over a period of 18 years. Several thousand Sarco steam traps, radiator valves and traps, air eliminators, strainers, and temperature controls are giving satisfactory performance.

For dependable heating specialties and all around satisfaction, you can confidently specify Sarco.

On your request, we'd be happy to send you full information on Sarco's complete line.

FOUR REASONS WHY IT PAYS TO SPECIFY SARCO

- 1. Proven Dependability
- 2. Trouble-free Service
- 3. Complete Line from One Reliable Manufacturer
- 4. Nationally Known and Preferred by Users.

Sarco Canada, Ltd., Toronto 8, Ontario . . . Represented in Principal Cities

STEAM TRAPS . TEMPERATURE CONTROLLERS . HEATING SPECIALTIES





















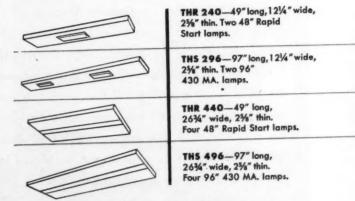
World's Thinnest Shielded Luminaire

No wonder Thin-Lite is creating such a sensation from coast to coast. Here, at last, is a surface mounted fixture so shallow that its depth below ceiling is essentially the same as that of troffers fitted with dished shields. Thin-Lite actually creates a semi-recessed effect.

The four different models (right) can be mounted end to end or side by side, in any combination, to form an unlimited variety of lighting patterns up to any desired size. A few suggestions are shown below.

Thin-Lite luminaires feature metal-framed, molded plastic louver panels, secured by LPI's patented floating hinge which cannot be seen from any angle, and which eliminates unsightly latches and fastening devices.

Available through leading electrical wholesalers, Thin-Lite uminaires are wired with standard E.T.L. ballasts.



Mail Coupon for Detailed Information

LIGHTING PATTERNS UNLIMITED



LIGHTING PRODUCTS INC.

Dept. 7 Highland Park, Illinois

Please send me a copy of Thin-Lite Brochure No. 530.

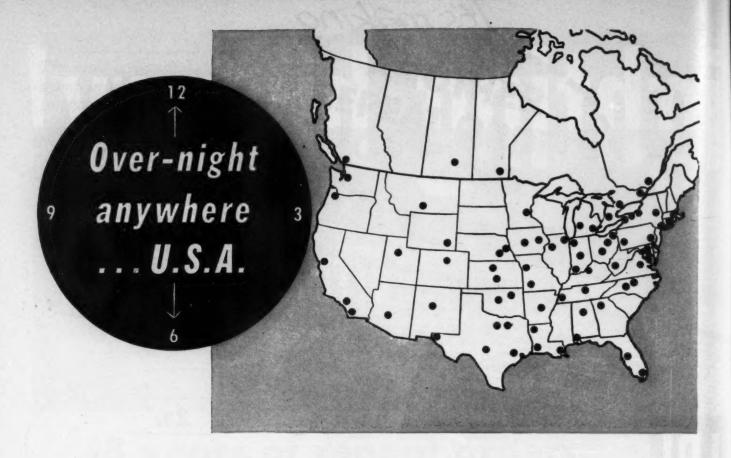
Position.

Name_____Position__

Company____

Address

City____State___



JENN-AIR LOW-CONTOUR exhausters

66 Distributors—Coast-to-Coast—Insure Fast Delivery and Service

In these days when speed's the need in building, it's good to know you can depend on fast delivery and service with Jenn-Air Low-Contour Exhausters . . . 66 distributing offices coast-to-coast mean over-night service anywhere in the U. S. A. And since Jenn-Air is the largest manufacturer of wall and roof exhausters in the commercial ventilation field, you can specify with confidence when you select Jenn-Air. So, if you're faced with a close building schedule, select Jenn-Air, and be assured your ventilating installation will be made on time and in time.

Jenn-Air, First with Low-Contour Exhauster Design

Jenn-Air is the originator of truly "low contour" exhauster design. In considering contour, two levels are important; the discharge level height, which must be sufficient to be above snow or blowing rain, and the over-all level height, which should be low enough to provide true low contour.

Jenn-Air Roof Exhausters with the nesting feature

(power assembly nested into base of unit) give a high point of discharge near the top of the unit and still retain the lowest possible contour. In addition Jenn-Air provides a pleasing architectural effect. Write for the name of your closest Jenn-Air distributor.

Jenn-Air — World's Largest Producer of Commercial Wall and Roof Exhausters

Low-contour Roof Exhausters blend with architectural design of building





Wall Exhausters—architecturally sculptured button design spots ventilation control



JENN-AIR PRODUCTS COMPANY, INC.
Architects & Builders Building - Indianapolis 4, Indiana

the news BLUE

CUPPLES



Cupples

CUPPLES PRODUCTS CORPORATION

when your planning includes DESKS
CHAIRS
FILES
CABINETS
LOCKERS

specify

ASE EQUIPMENT

your assurance of Beauty and Performance



DESKS

A complete line . . . matching tables, bookcases and credenzas for every office need.





CHAIRS

Swivel, Side, Arm and Posture types styled and built for comfort.



No. 5401

No. 5211



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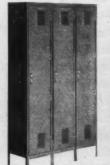
For every requirement. Superior quality... built for a life-time of service.

CABINETS

Storage, wardrobe, utility racks and "Unit Robes". High quality, sturdy...time tested.



No. 3487



Single-Tier



LOCKERS

Single-tier, double-tier and box types. Use ASE engineering assistance on planning.

Double-Tier

your reputation requires

quality equipment . . . the functional quality that is built into ASE products. ASE beauty is enduring . . . ASE quality is inherent. Maximum flexibility permits unusual latitude in solving your planning problems. You can design for tomorrow today! Write now for valuable pre-planning information on all ASE furniture.



ALL-STEEL EQUIPMENT INC., Aurora, Illinois

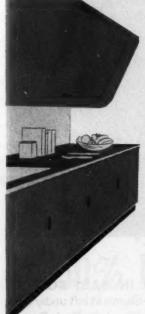
WRITE FOR COMPLETE INFORMATION, THERE'S AN ASE DEALER NEAR YOU

Marvibond weds vinyl to metal

for new BEAUTY,

new STRENGTH,

new PERMANENCE!







Now you can enjoy all of the advantages of metal-without the disadvantages of rust and corrosion—with colorful surface effects that are practically unlimited!

Marvibond-Naugatuck Chemical's recently developed vinyl-to-metal laminating process—bonds tough Marvinol® vinyl sheeting to practically any kind of sheet metal, permanently, to give you all these "extras"...

- permanent protection against rust and corrosion! One of the most inert of all known materials, vinyl resists acids, alkalies, salt water, alcohol, household chemicals, corrosive industrial liquids and atmospheres.
- lastingly beautiful surface effects! Vinyl can be given practically any color, in many finishes, including leather-like grains, marble patterns, prints, weave-like designs. * Patent applied for

- superior abrasion resistance! Marvinol vinyl finish resists abrasion far better than paints, lacquers, varnishes, phenolic or alkyd finishes, will not chip, crack, or craze.
- greater utility! Marvibonded metal eliminates many costly finishing operations—can be drawn, crimped, sheared, embossed, and otherwise formed without damage to coating or bond.

Investigate the unique advantages this new material combination offers you-in furniture, cabinets, wainscotting, tilelike walls, partitions, applications by the building-full.

Write us for further data, samples, or the names of the licensed MARVIBOND laminators nearest you.



Naugatuck Chemical

Division of United States Rubber Company Naugatuck, Connecticut



BRANCHES: Akron • Boston • Charlotte • Chicago • Los Angeles • Memphis • New York • Philadelphia • IN CANADA: Naugatuck Chemicals, Elmira, Ontario Rubber Chemicals • Synthetic Rubber • Plastics • Agricultural Chemicals • Reclaimed Rubber • Latices • Cable Address: Rubexport, N. Y.

On the Newsfront with Structural Steel

NEW YORK'S MOST MODERN MARINE TERMINAL—This \$12 million steel-and-concrete structure, Pier 57, is New York City's most modern marine terminal. More than 470,000 sq ft of usable space is provided, including two upper decks, accessible to trucks by ramps, and a huge underwater cargo area, reached by elevators. The roof can be used for the storage of automobiles, and is also designed as a helicopter landing area. Over 4700 tons of Bethlehem Structural Shapes were used in the construction.

Architect: Madigan-Hyland; General Contractor: Corbetta Construction Co.; Steel Fabricator: Harris Structural Steel Co., Inc., all of New York City.





NEW PIER IN EAST BOSTON HARBOR—Shown at left under construction is Pier 1 in East Boston Harbor. This \$9½ million marine terminal and warehouse is 340 ft by 580 ft, and contains over 1600 tons of Bethlehem Structural Shapes. Besides regular pier facilities and tremendous storage capacity, the warehouse contains facilities for pumping liquid cargoes directly from ship to tank car.

Flo

ballas

ating

lamp

quire

presc

ballas

given

Architects and Engineers: Fay, Spofford and Thorndike, Boston; General Contractor (Superstructure): Thomas O'Connor and Co., Inc., also of Boston, who also erected the steelwork; Steel Fabricator: West End Iron Works, Cambridge, Mass.

BETHLEHEM STEEL COMPANY BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM STEEL





EXCLUSIVE ELECTRICAL TESTS provide 100% check of G-E ballasts assuring you of rated output from ballast to lamp. When you buy or

specify General Electric ballasts, you're assured of up to $30\,\%$ more light and up to $50\,\%$ longer lamp life. This helps you save lighting dollars.

Flora* shows you why . . .

G-E Lamp-matched Ballasts Give You Up to 50% More Lamp Life, 30% More Light

The life and light output ratings of fluorescent lamps are based on their use with ballasts which provide the required operating characteristics. General Electric lamp-matched ballasts meet all lamp requirements; in many ways they exceed prescribed lamp and CBM specifications.

An indication of the importance of the ballast to more economical lighting is given in a report issued by the General

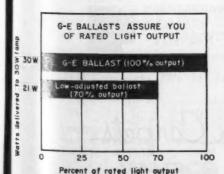
Electric Lamp Division which reads in part: "Tests indicate that ballasts which deliver improper values reduce lamp life by as much as 50% and light output by as much as 30%."

To fluorescent lighting users, this means G-E ballasts can save thousands of dollars in lighting costs.

Next time you specify equipment for a fluorescent lighting installation, make sure you get the best . . . specify General Electric lamp-matched ballasts.

A G-E ballast tag or sticker on your fixture is proof that it's equipped with the best in ballasts. It's the easy way to be certain. For further information on G-E ballasts, write Section 401-14, General Electric Company, Schenectady 5, New York.

*Miss Fluorescent Ballast, G.E.'s ballast mascot. Copyright 1955, General Electric Company.



RESULTS OF A SPECIFIC TEST show that light ulput can be reduced by as much as 30% then ballasts do not deliver specified elec-ical values. Specify G-E for rated output.

Five more reasons why

GENERAL ELECTRIC IS YOUR BEST BALLAST VALUE

- EXCLUSIVE SOUND RATING SYSTEM
- SUPERIOR QUALITY CONTROL
- LONGER BALLAST LIFE
- PROVED PRODUCT LEADERSHIP
- COMPLETE CUSTOMER SERVICES



Progress Is Our Most Important Product



Here's a new twist on "memory power"!

Twist a good carpet yarn - and set it for durability. Untwist for weaving and then subject to a special treatment—the original twist returns! Bigelow gave this "memory power" to carpet yarns and put it to amazing use!

After years of pioneering, Bigelow developed Sculptwist, the "pull-down" yarn that makes a beautifully sculptured multi-level carpet.

Formerly at a prohibitive price for the economical project budget, sculptured carpet then became completely practical for specification ... an ideal, luxurious selection for private rooms and offices at an affordable price.

In Sculptwist carpets you see one more reason why Bigelow is the number 1 name in carpets and the number 1 choice for architects.

Talk over your carpet needs with a Bigelow carpet specialist . . . to specify the best carpet at the best price. For complete details, write to Bigelow Contract Dept., 140 Madison Ave., New York 16, New York.



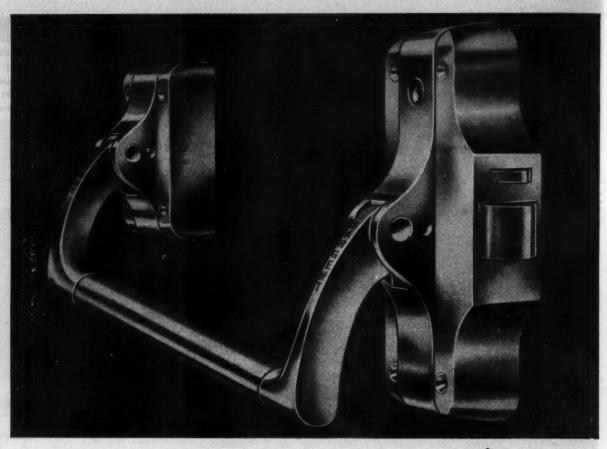
Bigelow



Number 1 name in Carpets



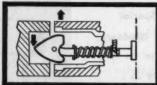
CITY.



It cannot jam!

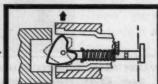
Outward pressure on a door can't bind this Sargent latch.





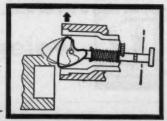
Look at the way the latch is built to pivot. Just a ¾" movement of the cross bar releases it, and...





the latch rolls . .





and then folds out of the way. Pressure actually helps to open it.

-either opening or closing

The function of a panic device is to prevent panic! To open doors instantly and easily in every emergency.

So, when human lives are at stake...specify the safest. Sargent Quick Exit Devices.

The diagrams will show you why.

Study them. You'll see why they cannot jam. Why the Sargent latch does not have to be retracted by the bar. The slightest bar movement releases the locking mechanism, making the latch bolt free-floating. This same easy, roll-fold action works in reverse to close doors smoothly, too. (Contrast this with devices that require complete movement of the latch by crossbar...latch bolts that may bind when pressure forces the bolt against the strike.)

Here's another plus . . . stainless steel is used for crossbar bearings, latch bolt pins and springs to give your clients lasting protection.

These exit devices come in Rim, Vertical Rod and Mortise Types. With or without mullions and thresholds. And all three types of bolts

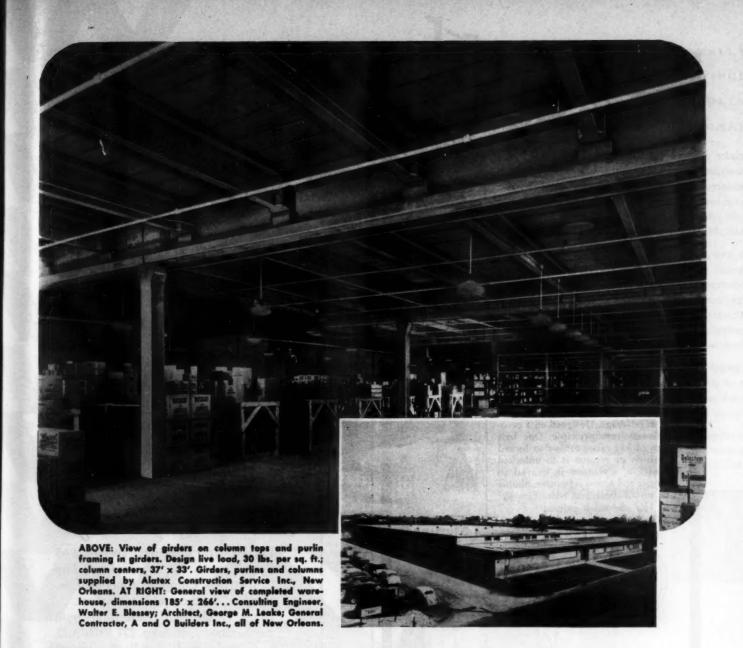
harmonize when used together . . . and with other Sargent hardware . . . in the same building.

Play it safe...with Sargent Quick Exit Bolts. Write for full details. Dept. 7-E.



Sargent & Company

New York · NEW HAVEN, CONN. · Chicago



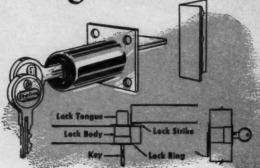
50,000 SQ. FT. PRESTRESSED WAREHOUSE ERECTED IN 18 DAYS

THAT'S THE STORY of the new Myer Brothers Drug Company warehouse and office building in New Orleans... the entire framework including precast Perlite roof slabs erected in 18 working days. Both the 36-in. deep "I" section girders and the 22-in. deep "T" section purlins are prestressed with Roebling %-in. diameter 7-wire stress-relieved strands pre-tensioned and bonded to the concrete. The prestressed members plus the precast reinforced concrete columns were purchased at an in-place cost of only 70 cents per sq. ft.

Roebling engineers, pioneers in the development of prestressing techniques and tensioning elements in America, will welcome the opportunity to cooperate with you to help assure maximum efficiency on any specific prestressed concrete application. Write Construction Materials Division, John A. Roebling's Sons Corporation, Trenton 2, N. J.

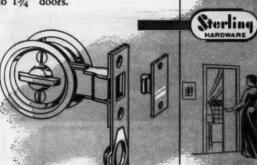


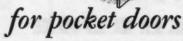




for by-passing doors

The first sliding door lock for bypassing doors. Now closets can be locked and contents kept secure from pilferage. Designed on a revolutionary new principle. One half turn of key raises tongue to locked position or returns it to unlocked position. Cylinder is geared to tongue and action is positive. Simple to install—bore one hole. Fits 3/4" to 13/4" doors.





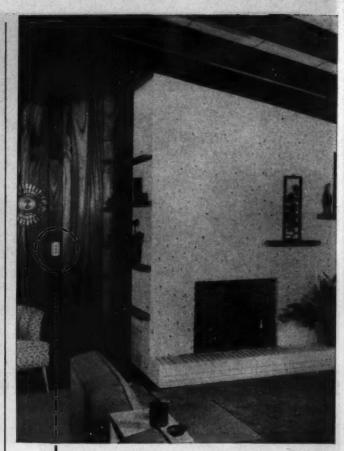
A new type of lock for bathroom or bedroom doors. Privacy is assured by turning locking button on inside. Emergency button on outside permits unlocking with screw driver or coin. Neat, simple installation. Fits 13/8" or 13/4" doors.



STERLING HARDWARE MFG. CO. Chicago 18, Illinois

SEE OUR CATALOG IN SWEET'S: Architectural File • Light Construction File

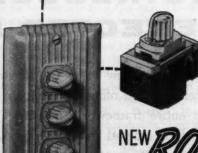
VISIT OUR DISPLAYS: Architects Samples Corporation, N.Y.C. Chicagoland Home Building Center, 130 W. Randolph St.



Modern beauty

For modern buildings, specify P&S Roto-Glo... the only truly modern light switch. Combines functional design... feather-quiet operation... glows in the dark. Precision-built mechanism... 15 Amp, 277 Volts A.C... designed to handle fluorescent loads with ease.

Write Dept. AR for the complete Roto-Glo story.



Available in P&S Despard and conventional strap types

it's a ROTO switch
it's a LUMINOUS switch

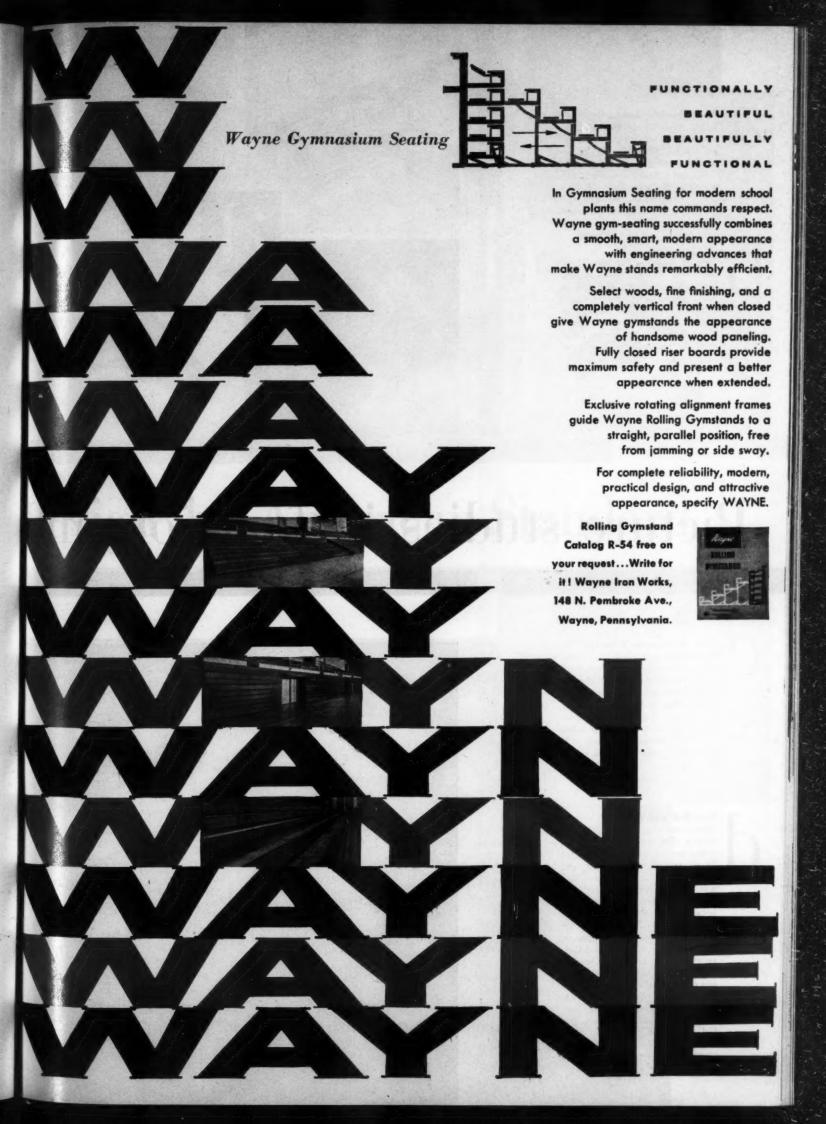
it's a QUIET switch

TO-CIA

Quiet Switch

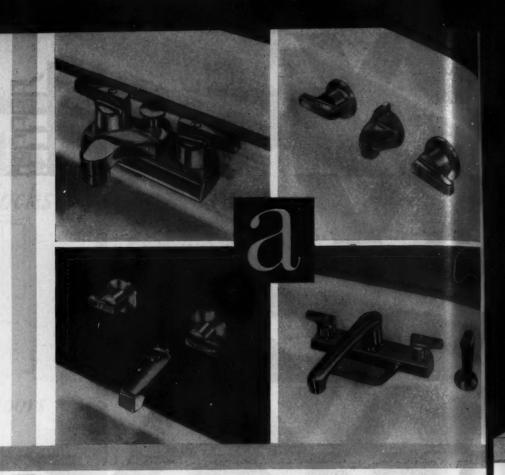
... because switches should be SEEN ... not heard

PASS & SEYMOUR, Inc., Syracuse 9, New York



New Quality Line. Here are smart, new fittings for the bath, lavatory and kitchen... in center-set and spread styles. They're designed to complement the modern lines of American-Standard plumbing fixtures, and will give long, dependable service. All Quality Line fittings are finished in gleaming Chromard for permanent beauty and easy cleaning.

New Monogram Fittings. These luxurious fittings have a rich satin chrome finish, and can be personalized with the owner's initials. Distinctive Monogram fittings are available with clear or colored non-slip handles to blend with the bathroom color scheme.



Picture studies in function and

New Bathroom Fixture. The Dentaledge is a useful and sanitary addition to the modern bath . . . it helps relieve bathroom "rush-hour traffic"! This 14" x 14" dental lavatory features a flushing rim with a back-flow preventer. Styled to harmonize with other American-Standard fixtures, it is made of genuine vitreous china.

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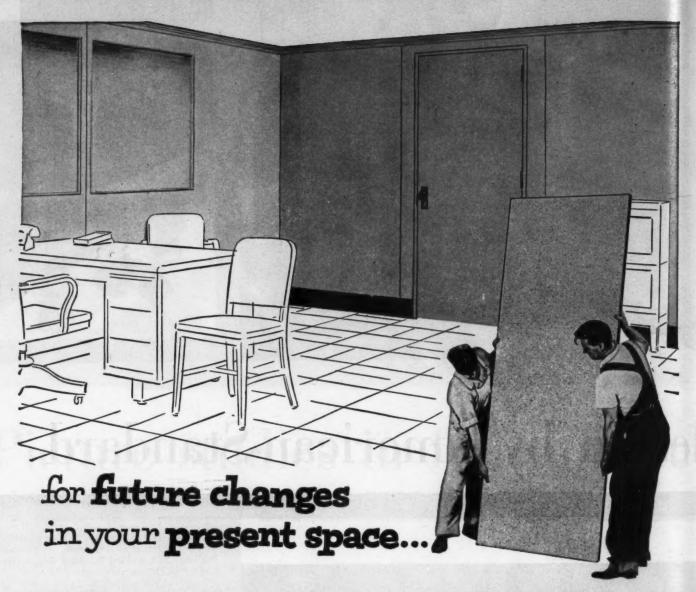


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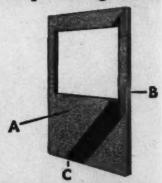
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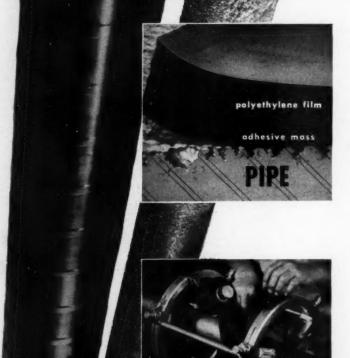


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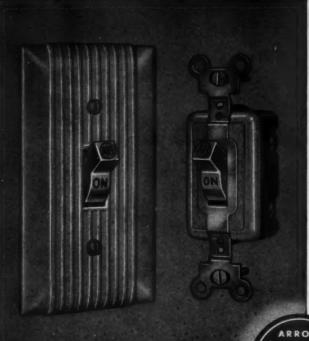
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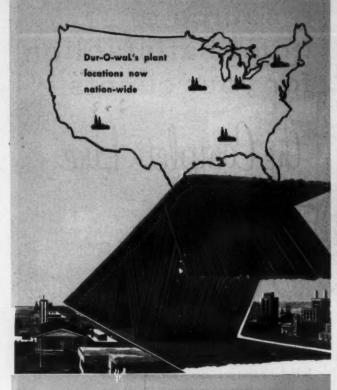
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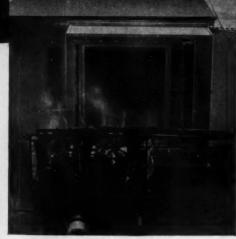


Photo above shows actual testing of 6' x 6' aluminum window at the University of Miaml, Florida. This was a wind and water test to determine air and water leakage of entire assembly with winds of 100 mph accompanied by the equivalent of 4" of rain per hour, sustained for 10 minutes against the surface of the window.

Top photo: Standard-Vacuum Oil Co. Office Bldg., Harrison, N. Y. Architects: Eggers and Higgins Contractor: Starrett Bros. & Eken, Inc. When performance is one of the major requirements, you'll find more and more jobs calling for aluminum windows by GENERAL BRONZE.

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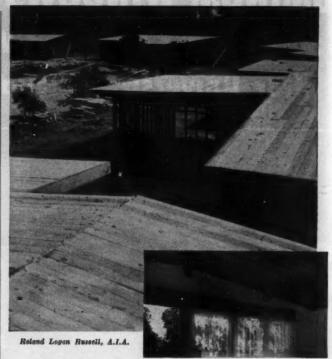


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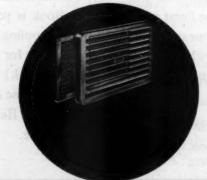


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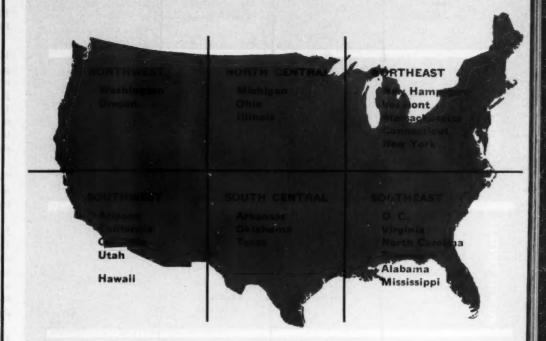
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HOUSES BUILDING TYPES STUDY 222



ARCHITECTS COAST-TO-COAST COMMENT ON DESIGN TRENDS

WHAT ARE THE TRENDS in today's house architecture in the United States? Are they regional? Do they point up certain structural systems, certain materials, or certain space arrangements?

Since such questions require comments from all parts of the country before they can be answered satisfactorily, the Record editors queried every architect whose house work we have published in the past two years or currently have in our files. We asked two questions: (1) What do you most like or dislike about today's custom-designed house? and (2) What do you consider today's major trends in house design as regards structure, materials, exterior appearance and space arrangement? A gratifying number of those queried replied — with the revealing results tabulated and quoted on the next two pages. The 13 houses which follow illustrate many of the same points.

- Florence A. van Wyck

STRUCTURE	MATERIALS	EXTERIOR	SPACE	NOTIFICATION A TOTAL AND ADDRESS OF THE PROPERTY OF THE PROPER
				"I like the simple house with large windows on garden side. I dislike large windows on street with lack of privacy."—William J. Bain
				Like "care given to technical problems: heat, light, equipment." — Fred Bassetti
tion of the second of the seco	Disable 1 Disable 1 Disable 1 Disable 1 Vanishing 1	Constant of the second of the	The syring of the same of the	Like "the possibilities inherent in the proper use of site, materials and originality to arrive at a solution fitting to the problem and the clients' requirements." Dislike "stereotyped solutions that smack of clichés; too much openness and glass improperly used to suit most clients and climates." — Baume & Polivnick
(man /)		Side policy seeks	Cover and the	"I see no special trend other than towards more thoughtfully and economically planned houses." — Pietro Belluschi
po promoti de la companya de la comp	Duranti Hamiliy and A. Hamiliy and A. Hamiliy and A.	Communicative Uses and track of Association of the communication Streetly property of the communication of the com		Like "efforts to recapture big space." Dislike "general sterility and self-conscious clumsiness of many examples." "Through simplicity of concept and elimination of some gadgetry, the effort to regain big space, I think, are presently most important." — Thomas J. Biggs
Approved App	C. Assembly Develope Mestope a Policies of	Diversity Senso to provey Senso to provey Senso to provey	Al totacle only Balais dicach Las Massa	Like "the return of a certain restraint or formelity, if you can call it such, imposed by the designer's adherence to an architectural pattern formed by a structural module or system filled with combinations of solid, translucent, or transparent materials." — Noland Blass, Jr.
And force	Water Linear In Water Water	Ure pala poentia Smoothered expression	Christian olym.	"There seems to be a movement towards more organization in planning. One sees hints that there is some order in Design emerging from the chaotic helter-skelter searchings of the late 40's and the early 50's. In fact, it almost seems as if the Architects as a whole are beginning to see a
				path through this wilderness of Modern Architecture." — Bolton and Barnstone Like "the study given to proper orientation, and the psychological impact of enclosed space." Dislike "too much glass facing on adjoining property or a thoroughfare." — Leon Brown
Ready - Company of the Company of th	Company Compan	Code Supplies Fascalinges Lope alone creas Acrepator Supplies In contral plant	Tanks of the second of the sec	"In the field of custom-designed homes, design is becoming less biased, less an end in itself and more a process, as should be. The result is a demonstration of vigorous architecture as it evolves from contemporary family needs I think there is a clear departure from the two dimensional open plan toward a three dimensional open space. That is to say there is a utilization of vertical space interrelations as well as horizontal." — Chas. Burchard
	Appending	Section 1977 Se	About the second of the second	Common State of State

QUOTES FROM PARTICIPANTS

"I like what I feel is honestly good design, and dislike what I know to be over-designed junk. . . . Too many [architects] are beginning to follow a pattern. . . . There is a wide variety to be found, but there is also a great quantity of highly similar stuff being done. I do not exclude some of our own work. Some of this is due to the pressure of economics, but some I am afraid is a lack of imagination; and some of the worst we see is just plain bad taste. . . ." — John Carden Campbell

Like "use of materials in their natural state; the integration of the house with the landscape; the ease of building on difficult view property." Dislike "design trickery such as unrequired steel crossbracing on wood frame house." — Wm. H. Carleton

Like "the freedom of design to develop living facilities for mankind beyond just putting a roof overhead. Utilization of outside and inside areas blending them into a composite whole; freedom from traditional arrangements of functional areas." — Eugene Kinn Choy

"Like the best of them [custom-designed houses] because they are honest, unaffected, efficiently planned and humanized contemporary design. Dislike the worst of them because they have a mechanical appearance: surfaces which should be natural are slick; stone work which should look like masonry looks like gum drops or layer cake; unshuttered picture windows are placed where there is too much sun and perhaps no view (except from the outsidein, of papa in his suspenders reading the newspaper); many clichés are used, none with discrimination or taste." — Clark and Beuttler

"Very little study seems to be given to imaginative use of materials and structural methods." — Walter H. Costa

Dislike "lack of integration with community planning, lack of variety in various interior spaces, overemphasis on gadgets and equipment at the expense of space." — Harold Edelman

"I think the owner is receiving more livability per \$ spent. . . . In some instances designs need softening. Can possibly be obtained by a more careful selection of materials and colors." — Arthur Fehr

Like "the unlimited sectional characteristics of the house which can result from enlightened solutions of site and spacial relationships." Dislike "the slavish imita-

tion of contemporary styles of the great in architecture." — Seth M. Fulcher

"I don't like houses that strain tiresomely for effect. I don't like houses that look shabby and worn out after a few years. Both are common faults." — Walter Gordon

Like "the natural use of materials, openness of planning, recognition of climatic conditions, and tailoring to the client's needs rather than to a preconceived concept of design." Dislike "occasional straining at the leash to incorporate clichés or tricky materials uses which do not contribute anything to the net result."—

Fred M. Guirey

Like "built-in features, opening of plan." Dislike "lack of work space and storage space for bulky items. Some houses are too open to public." — Harold W. Hall

Like "the way some homes are really designed for their own site and region; the way some homes express original thinking to meet the specific problems; open planning, limited by privacy, through an entire concept of a plan, limited only by property lines or defined views; an honest recognition of materials and their own characteristics." Dislike "the lack of understanding of the simplest of basic fundamentals—i.e., circulation, orientation."—Henry Hill

"I favor the trend toward flexible room uses, and means of combining spaces, but do not go along with some examples of excessive openness of plan with no means of control or subdivision for privacy or quiet - nor with some plans where circulation is overlooked. . . . The effects of mechanical equipment cannot be neglected in house design. The complex of kitchen and laundry equipment now available (and demanded by most clients) almost require more design efforts than all the rest of the house. Adding air conditioning, sun lamps, indirect lighting, panel heating, etc. can often make the house an engineer's paradise, but an architect's nightmare." - Gerson T. Hirsch

Dislike "excessive use of glass with resultant loss of privacy. The home should be a place of intimacy and not a fishbowl."—
James M. Hoffman

"I believe that space is quite necessary for a family — space for individual privacy, and larger space that can give one a sense of freedom for thought and feeling as well as movement. . . . What I like about the better house is a character of domestic warmth and scale, a feeling for design within the framework of a philosophy that believes in individuals, as opposed to an expression of our highly industrialized culture. . . . Man's esthetic wants must be satisfied, perhaps even stimulated, in his home. . . . The house should have richness and warmth, and should be an organic unity, much as man himself. . . . I think there is, in favor of today's houses, a trend away from novelty for its own sake, in structure and in exterior appearance."

— Victor Hornbein

Like "freedom from stylistic dogma in enough cases to give hope of the development of a great architecture in our time." Dislike "careless detailing of much work." — M. K. Hunter

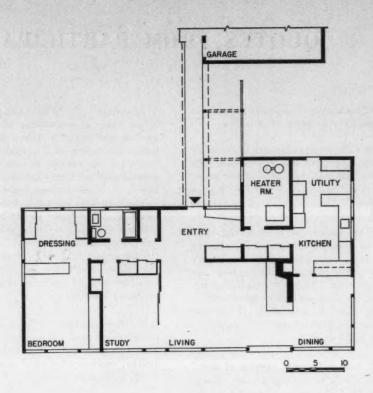
Like "new disposition of functional spaces." Dislike "lack of clarity." Note "The discovery of basic house plan types as clearly recognizable as the 'Cape Cod' central chimney type: i.e., 'central core,' 'central court,' 'H' (which will be used extensively by speculative builders."—
John MacL. Johansen

"The open plan is receiving some criticism in these days of sizable families."—George Fred Keck

Like "Straightforward use of the structural elements, the visual rhythm of the exposed beams and posts inherent in the architecture. Particularly, the use of the partially enclosed patios and terraces (away from the main view)." Dislike "complicated masses with excessive ornamentation." — Bernard Kessler

Like "the trend toward providing more and more people with well designed houses for less money and even on the custom design level." Dislike "the effect of magazines, and particularly ladies' magazines as well as recent architectural books on today's client. They believe that they can have everything they read about, all for a minimum budget. Magazines should refrain from quoting phony prices." — Carl Koch and F. L. Day

"Rising costs are keeping the size of houses generally small, but by ingenious planning and clever use of materials architects are creating the illusions of space where it really does not exist in large quantities. New patterns of living have exploded the old familiar plans. Indoors and (Continued on page 302)



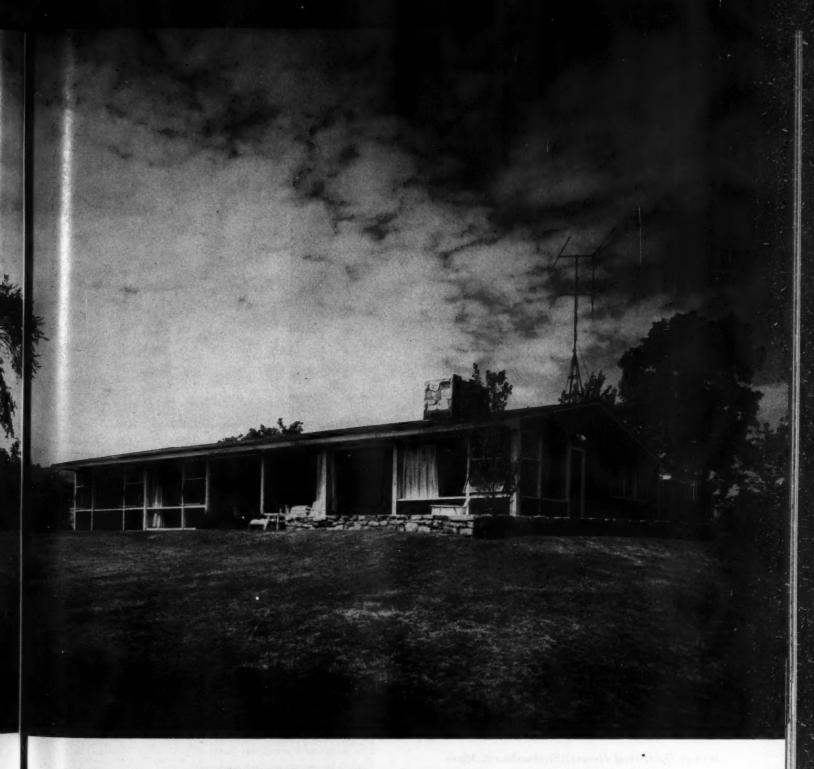
Flexibility. House was planned for man and wife and occasional guest; one end of living room can be closed off as needed for owner's study or guest bedroom, or can be opened to considerably enlarge living-dining area for entertaining. Owner's hobby is book-binding, to which one corner of kitchen was assigned

NORTHEAST

Arthur Hamilton House, Shrewsbury, Mass.
Carl Koch & Associates, Architects
Frederic L. Day, Jr., Associate







Site Relationship. Site is large, with a long gradual slope at rear which low pitch of roof echoes; living room has floor-to-ceiling glass wall which extends room to far corner of site. Materials. Vertical T&G siding and painted (red) plywood panels on exterior; concrete floors







NORTHEAST

Arthur Hamilton House, Shrewsbury, Mass. (continued)

Openness plus Privacy. Main area of living room is closed off from entry by ceilinghigh bookcase-storage unit; living and dining areas are separated by fireplace. Kitchen has direct access to carport through utility room and to entry by short enclosed hallway







HAWAII

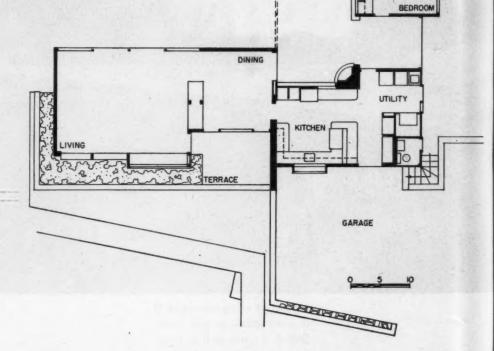




M. M. Goodsill House, Honolulu, Hawaii Vladimir Ossipoff, Architect

Privacy. The lot this house occupies is relatively small, and in a well-populated residential area. Since provision for outdoor living is an absolute must in Hawaii, the problem was how to combine that requirement with a reasonable amount of privacy. As the plan (next page) shows, one wing of the house was placed at an angle to increase the area of the inner court, which every room in the house faces

Zoned Plan. Limitations of site (see preceding page) resulted in house with angled wings and unusually complete zoning: living-dining-kitchen areas stretch across front of house and open to lanai and patio; master bedroom suite is wholly separate, connecting with rest of house by lanai. Use of wood for ceilings and walls throughout house unites various plan elements



LANAI

HAWAII

M. M. Goodsill House, Honolulu, Hawaii (continued)







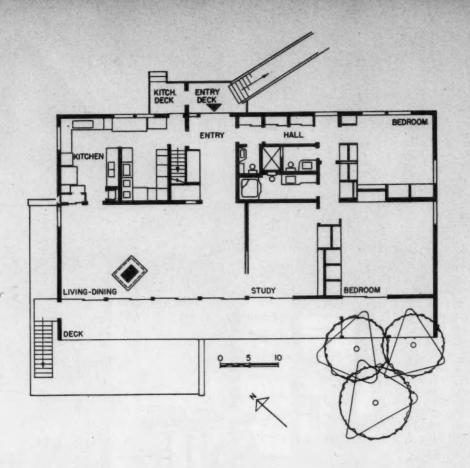








Wenkom



Site Relationship. Site slopes steeply at rear toward fine view of Ohio River and city; carport at street level necessitated a bridge to main entrance. Owners wanted one-level house with maximum flexibility, easy access to outdoors, and minimum maintenance for both house and garden. Solution: all main rooms on upper level with connecting deck along whole view side; lower-level game room and covered terrace planned for future conversion to two-bedroom suite, so full bathroom is already installed

NORTH CENTRAL

M. L. Cornelious House, Cincinnati, Ohio Carl A. Strauss, Architect



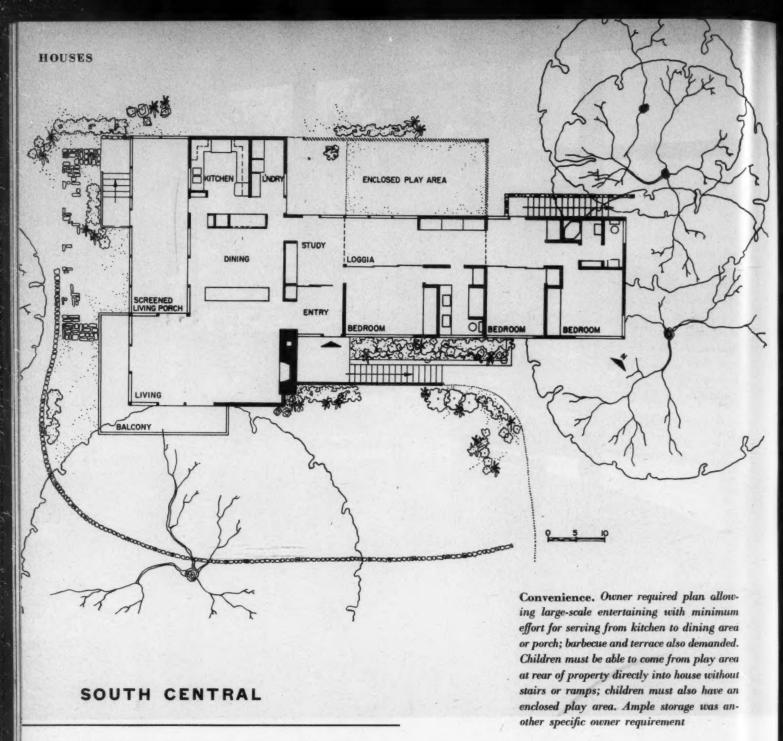




Structure. Concrete block, concrete footings and piers; wood frame; exterior walls, redwood; floors, asphalt tile over plywood; plaster ceilings. Free-standing fireplace resulted from owners' desire for fireplace on view side without spoiling view. Roof is built-up with gravel and oyster shells







Dr. Clifford G. Thorne House, Austin, Texas

R. Gommel Roessner, Architect





leans Photography

Site Relationship. Site was difficult, rising in grade from a creek at low point more than 40 ft to top. Slope was used partly for lowerlevel outdoor living area with required barbecue pit. Rest of house is on one level

Materials. Glass fiber insulation, cork flooring, fir paneling, 4-ply built-up roof

Total Cost. \$32,765









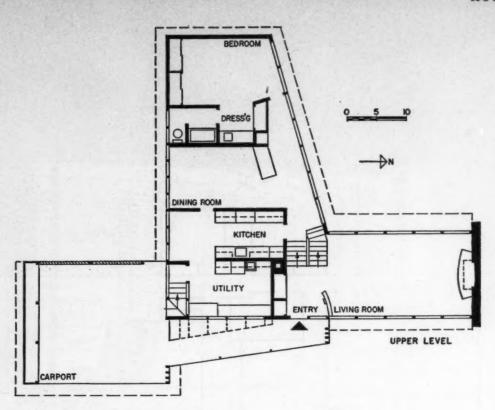
NORTHWEST

Harold W. Hall House, Everett, Wash. Harold W. Hall, Architect

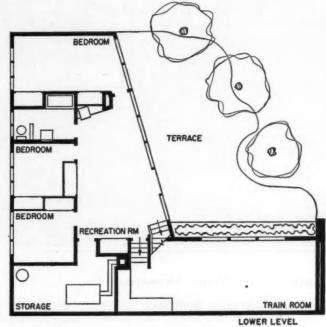
Utility Core. "I have always felt that it was very important that the kitchen-utility area be located and planned as one unit relatively close to the front and also be large enough so that everything did not have to be put away in its particular place all the time" — H.W.H.





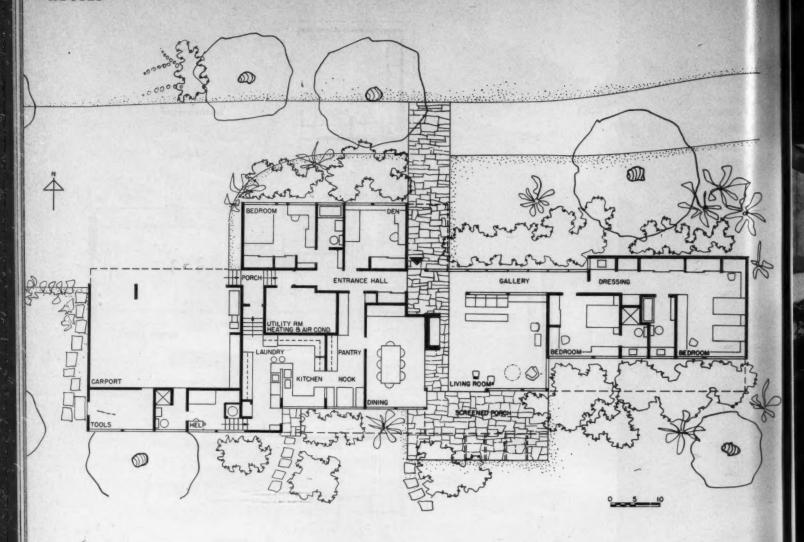


Activity Zoning. Parents have upper level, four small children the lower. Children's bedrooms open to large play area and thence to terrace. Hot air radiant heating system on lower level keeps floor warm for children playing. Cost per square foot, \$8.00









SOUTHWEST

James O'Brien House, Shreveport, La. Richard J. Neutra, Architect Privacy. House was placed to preserve as many trees as possible for privacy in residential neighborhood. Main requirement for arrangement of rooms was provision for visits of married sons and daughters and small grandchildren, hence wholly separate master and guest bedroom areas (one son still lives at home)



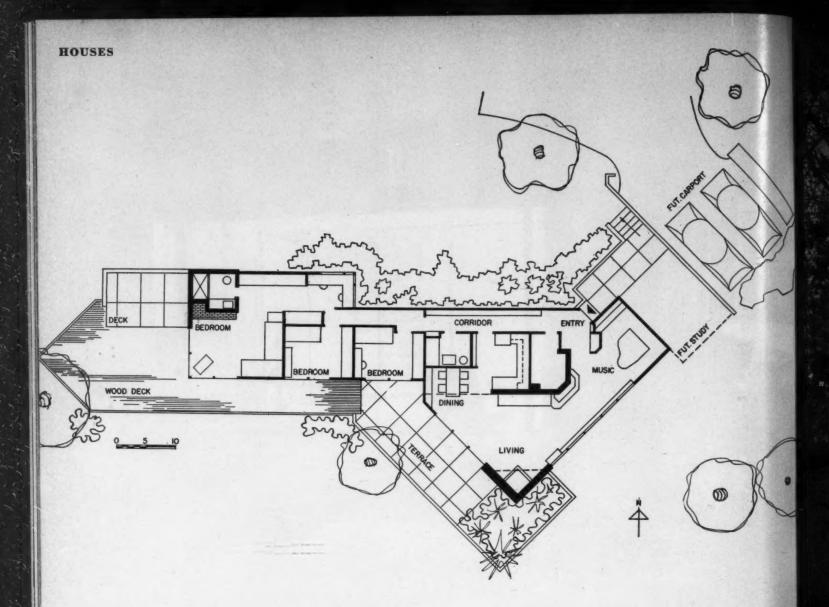




Warm Materials. Construction is wood frame on concrete slab with exterior siding of T&G redwood in contrasting vertical and horizontal treatments; in living area ceilings are redwood, walls are white plastered; chimney is flagstone, as are floors in entry and screened porch







NORTHEAST

Aaron L. Resnick House, Pleasantville, N. Y.

Aaron L. Resnick, Architect

Indoor-outdoor Living. All main rooms open to decks a few feet above grade. Living room is V-shaped for views to southeast and southwest; fireplace shuts out unwanted view of another house directly to south, increasing sense of privacy





Activity Zoning. Master bedroom and terrace were designed as secondary living room for parents' use when two young daughters entertain; shape of living room gives privacy to dining area. Materials. Cement floors, brick and plywood walls, cypress siding. Interiors by Mrs. Resnick





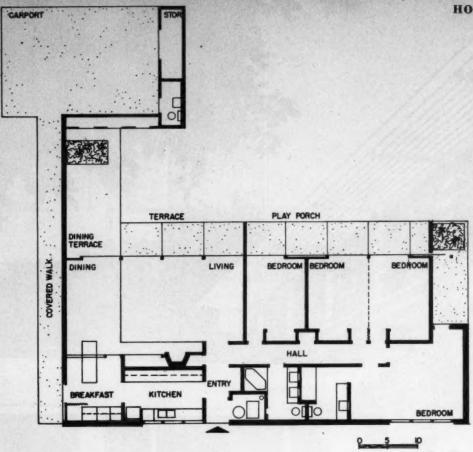




Structure. Post and beam, with structural elements exposed throughout; 4 by 10 in. beams on 7 ft centers form module for glass sliding panels on south and fixed glass and glass louver panels on north; roof deck exposed and stained a rich brown to form the finished ceiling







Large Glass Areas. All major rooms (except master bedroom) open to south through a wall-to-wall expanse of glass 10 ft high. Future plans call for extension of house to west property line, when present master bedroom will become a guest room-study and a new master suite, with southern exposure, will be added. Cost of house, excluding land, landscaping and fees: \$36,000

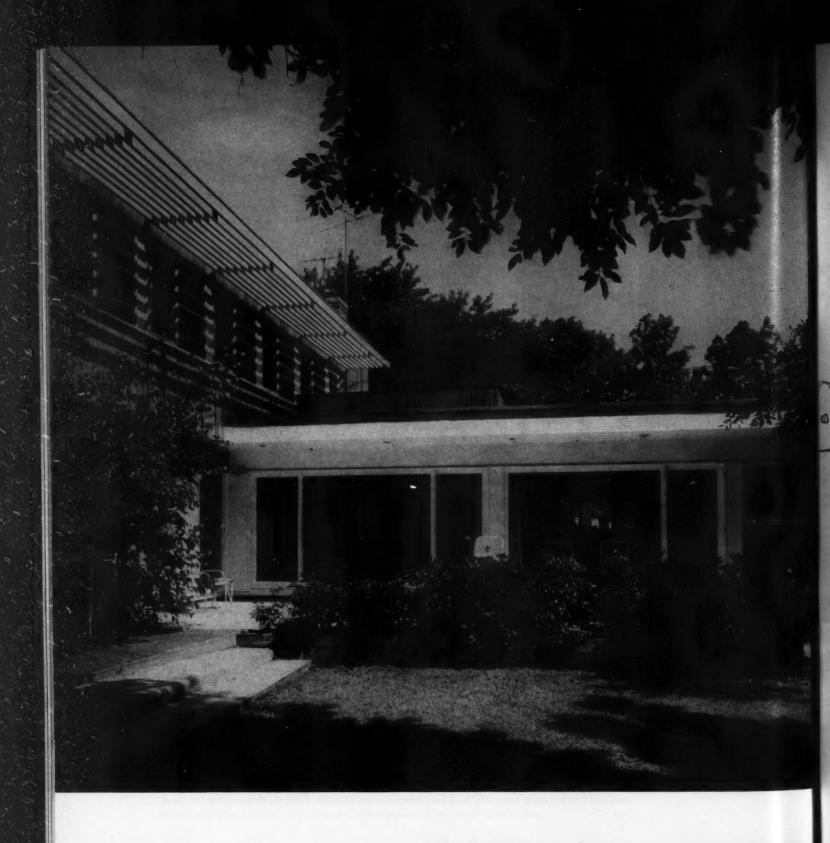
SOUTHEAST

Dr. Stanley Cohen House, New Orleans, La.
Curtis and Davis, Architects-Engineers



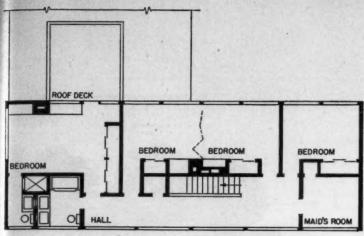




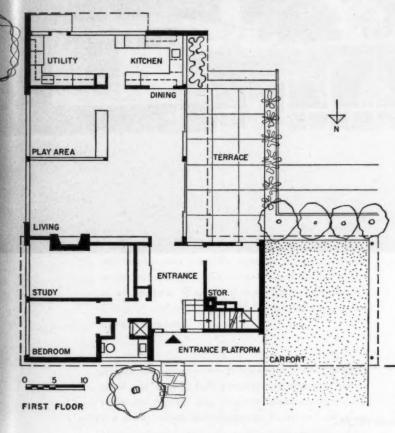


Exterior Appearance. "The masses of the lower and upper floors were put perpendicular to each other to achieve southern exposure for the bedrooms, which the client requested. . . . This disposition of the two floors, together with the open carport, also serves the purpose of giving a feeling of lightness and openness to what might have been a heavy, ponderous building mass." — W. W. L. Cost of house without landscaping: \$43,000





SECOND FLOOR



Zoned Plan. Household consists of four adults and three children, necessitating six bedrooms, three baths, play area and much storage space. Requirements also included a doctor's study and a private garden area. Site is relatively small (100 by 125 ft) corner lot; a 40-ft setback from each street was mandatory. Solution was L-shaped plan enclosing back corner of lot. Kitchen was located for southern exposure, convenient access to street for service entrance, and view of garden for supervision of children's play activities

NORTHEAST

Dr. Rudolph Joseph House, Freeport, N. Y.
William W. Landsberg, Architect







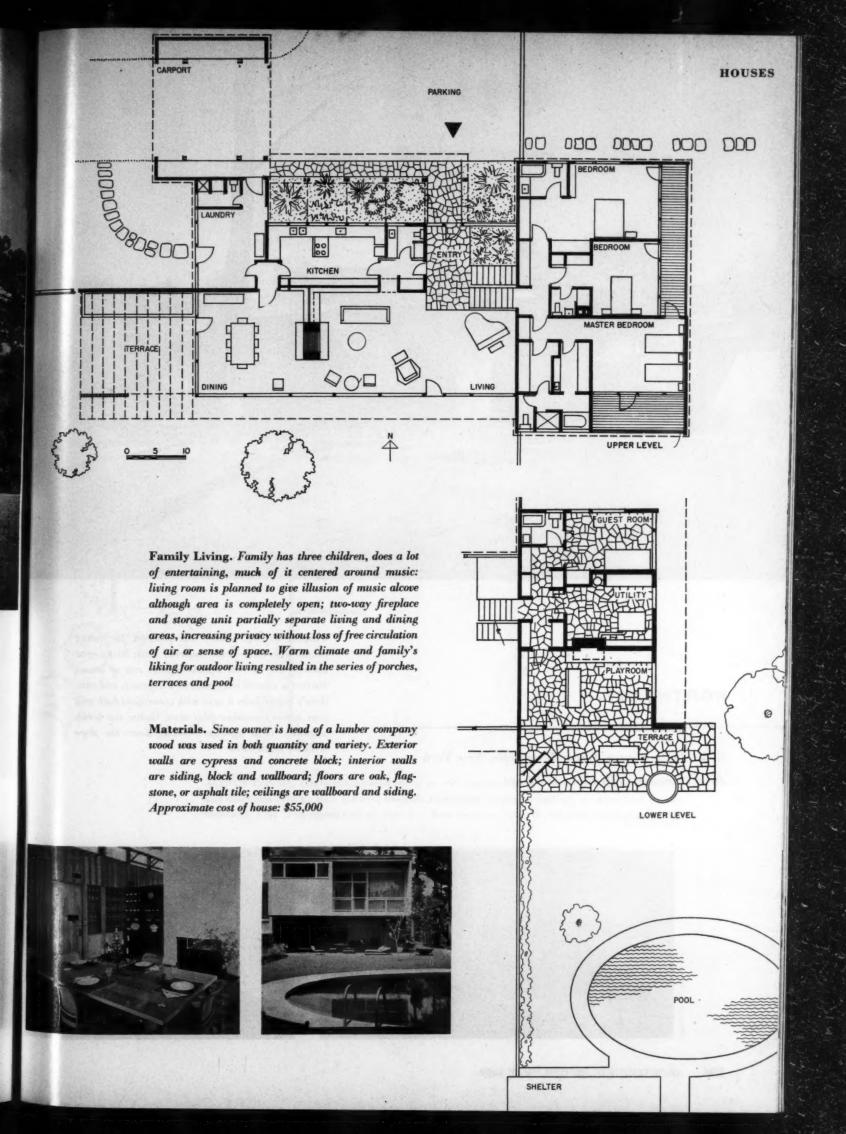
SOUTHEAST

Julian McGowin House, Chapman, Ala.

Huson Jackson, Architect; H. Seymour Howard, Jr.,
and Harold Edelman, Associates









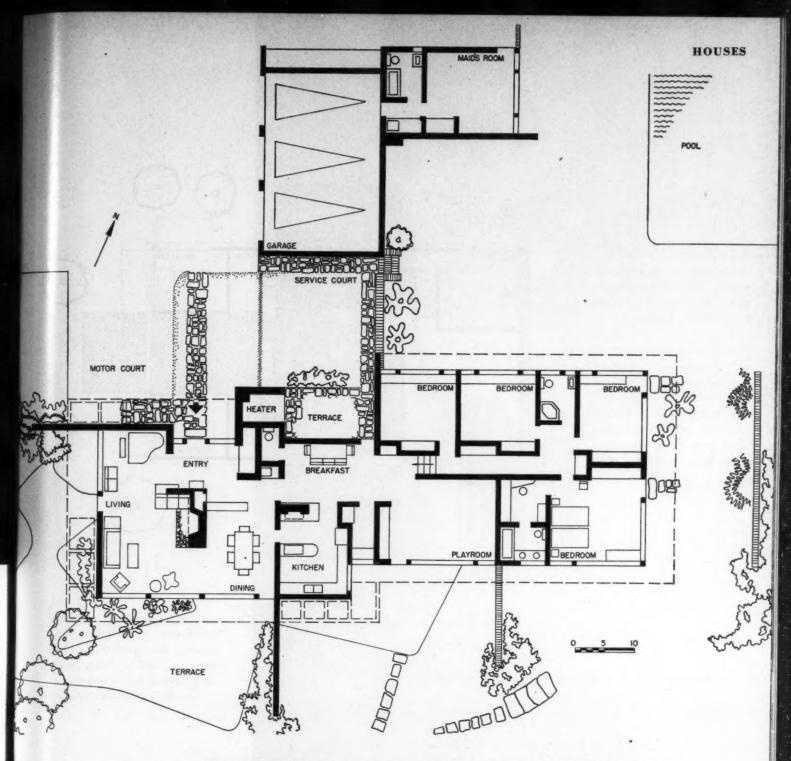
NORTHEAST

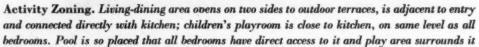
R. W. Colby House, Upper Brookville, New York John Hancock Callender, Architect Family Living. House was planned for young couple with three small children; main living area consequently is well separated from rest of house, kitchen is central with playroom adjacent, and children's rooms form a unit with convenient bath and easy access to outdoor play area. Owner has hobby workshop in a separate building down the slope from the main house





seach W. Molifor



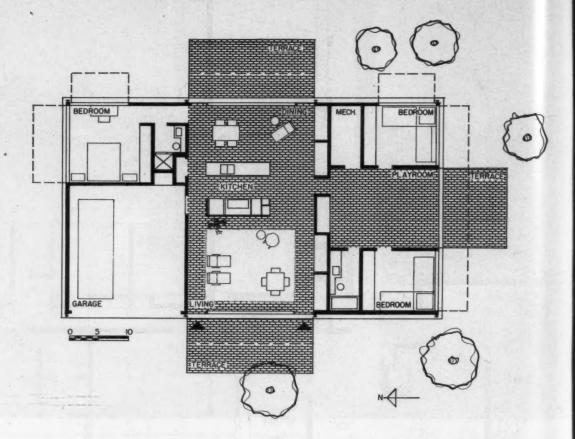






Individual Privacy. Children's wing is insulated from rest of house by continuous wall of closets; playroom is between children's bedrooms

Open Plan. Living, dining and kitchen areas form one large central room, completely open to breeze side (east) and also open to west for cross ventilation, an important consideration since house is not yet air conditioned though ducts are installed

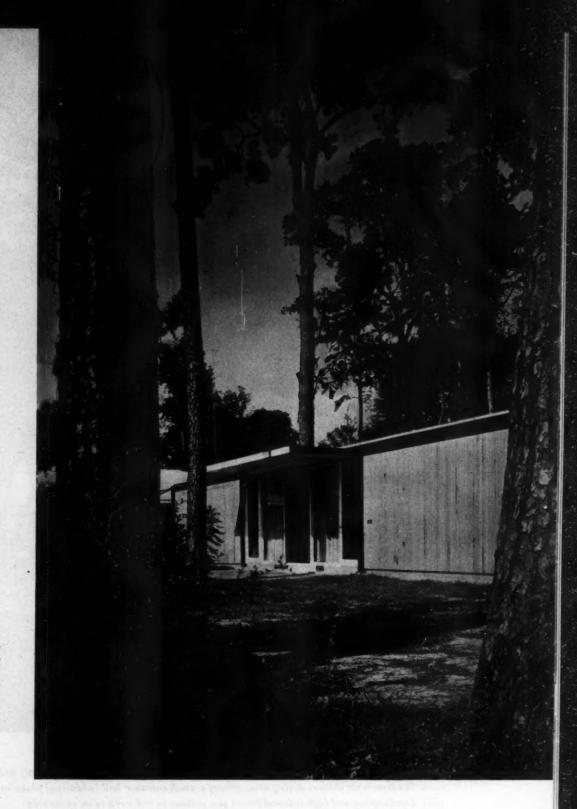


SOUTH CENTRAL

Laurence H. Blum House, Beaumont, Texas Bolton and Barnstone, Architects







Structure. Steel frame: 2 by 12 in. fascia on eight 4-in. wide flange columns. Overhangs are redwood 2 by 6 members at 3 in. o.c., set in steel channels cantilevered from structural steel channel fascias



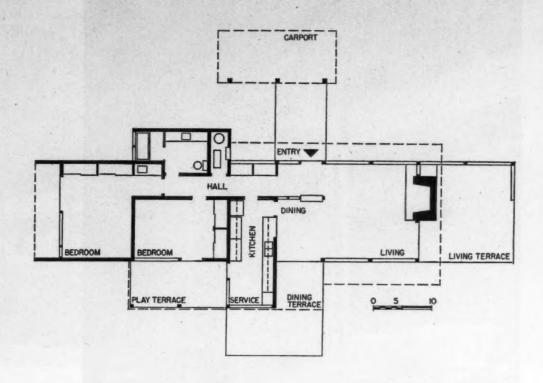




Openness plus Privacy. Entrance is from carport through landscaped court directly to living room. Bookcase unit shelters dining area, creates a small entrance hall (additional photo on page 186). Landscaping and high reduvoid fences give privacy to end terraces on street side







Indoor-outdoor Living. Every room in house has its own terrace arranged for complete privacy from street. Play terrace adjoins kitchen as well as children's bedroom for easy play supervision. Materials: Vertical redwood siding, redwood and fir plywood interior walls and ceilings; brick or asphalt tile floors

SOUTHWEST

Calvin C. Straub House, Altadena, Calif. Calvin C. Straub, Designer









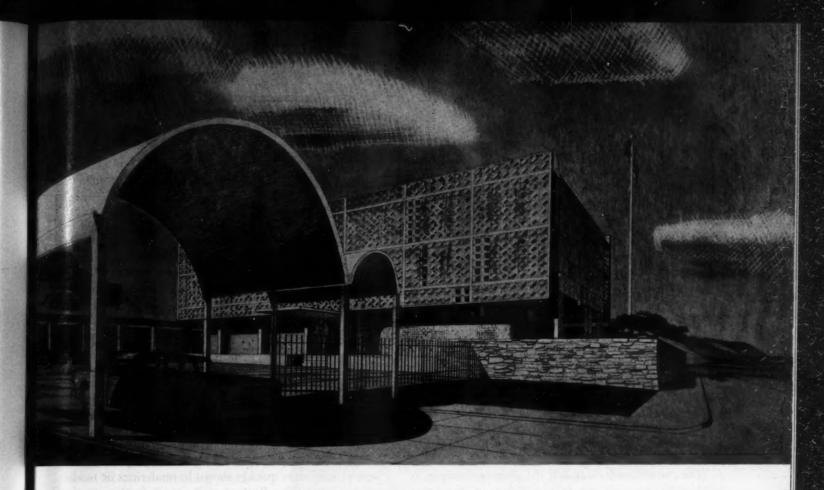
SOUTHWEST

Calvin C. Straub House, Altadena, Calif. (continued)

Sense of Space. Space is unbroken for full length of house from living room fireplace to terrace door of master bedroom; bedroom hall is lighted by high windows over storage cabinets



don't Hook



U. S. Legation Office Building Tangier, Morocco Hugh Stubbins Associates, Architects

While this rendering is rather dominated by the arches at the entrance, other features will perhaps contribute more to the overall expression: pierced concrete sun screens shading the large glass areas of the three-story building, marble facing at the ends, an arcaded patio landscaped with water pools and orange trees. The Consular Court at ground level will have a surround of glass at the ceiling line with a dado of colorful mosaic tile. The three-story building is roughly in the center of a one-and-a-half-acre site, is surrounded by one-story elements which with it form the entrance court on one side and an enclosed patio on the other. Open arcades provide circulation at ground level. One-story buildings are wall bearing, with stucco finish.

ARCHITECTURE TO REPRESENT AMERICA ABROAD

Regional Expressions of American Architectural Thinking are Sought for State Department Buildings

The New program for State Department buildings in foreign countries might be characterized as a significant experiment in regional architecture for diplomatic objectives. Really now just getting to the first-look stage, the refurbished operation has a panel of famous architects to guide it and a clear statement of purposes. A dozen or so American architects have had plans for various buildings approved, and an appropriation decision is now in the making.

Objectives are given as two: (1) to represent American architecture abroad; (2) to adapt itself to local conditions and cultures so deftly that it is welcomed, not

criticized, by its hosts. Here is a clear mandate to develop a sympathetic, regional expression of our own architectural thinking, all to a purpose whose importance transcends the normal challenges in design.

This was the need that led to the formation of the rotating Architectural Advisory Panel for the Foreign Buildings Operation, consisting of: Pietro Belluschi, F.A.I.A., dean of the School of Architecture and Planning, Massachusetts Institute of Technology; Henry Shepley, F.A.I.A., of Shepley, Bulfinch, Richardson & Abbott, Boston; and Ralph Walker, F.A.I.A., of Voorhees, Walker, Smith & Smith, New York. The panel is

chairmanned by Col. Harry A. McBride, former Foreign Service officer and Assistant Secretary of State, and, from 1939 until his retirement, administrator of the National Gallery of Art.

To state the objectives positively for the panel, Mr. Belluschi prepared this addendum to the State

Department's instruction sheet:

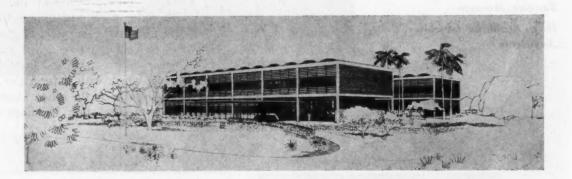
"To the sensitive and imaginative designer it will be an invitation to give serious study to local conditions of climate and site, to understand and sympathize with local customs and people, and to grasp the historical meaning of the particular environment in which the new building must be set. He will do so with a free mind without being dictated by obsolete or sterile formulae or clichés, be they old or new; he will avoid being either bizarre or fashionable, yet he will not fear using new techniques or new materials should these constitute real advance in architectural thinking.

"It is hoped that the selected architects will think of style not in its narrower meaning but as a quality to be imparted to the building, a quality reflecting deep understanding of conditions and people. His directness and freshness of approach will thus have a distinguishable American flavor.

"The committee feels that if the above philosophy is adhered to, we need not fear criticism; on the other hand, if we act timidly, solely in the hope of avoiding any and all criticism from whatever quarters, we shall surely end up in dull compromises with the result that we shall have nothing but undistinguished buildings to represent us abroad. We would thereby have forfeited our opportunity to display the high American cultural achievements in the field of architecture generally recognized by architects of the more advanced nations of the world."

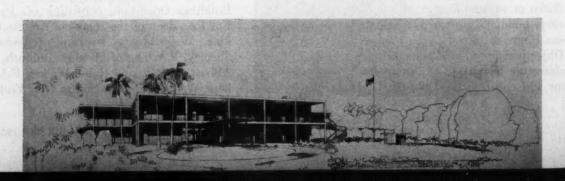
Architects invited by the Department of State—after consultation with the Advisory Panel—to participate in the program are sent to visit their assigned sites after intensive briefing by the department and the Panel. They normally then make two "presentations" before the officials and the panel: at the first, preliminary designs are presented and discussed; at the second, the final schemes incorporating any suggestions or amendments arrived at through the first discussion are submitted and—usually—approved. Architects are to visit sites a second time during construction. Although there has so far been no conflict of judgment, it should be noted that the function of the Advisory Panel is advisory only; and the State Department does not bind itself to accept Panel recommendations.

On following pages ten of the early projects in the new program are quickly shown in renderings or model photographs. The Record will report further as the program develops.



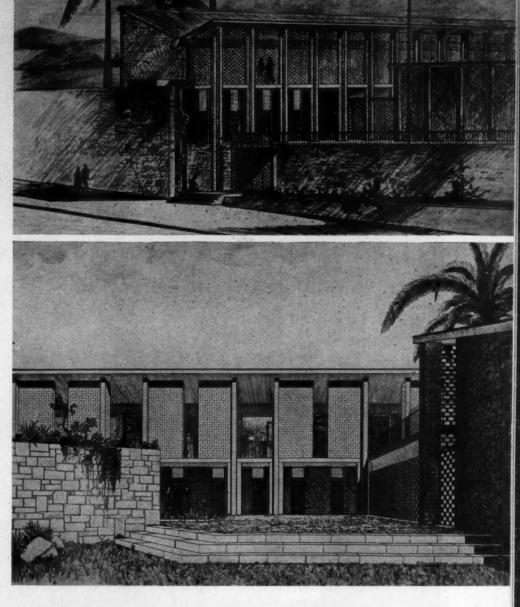
Office Building (above) and Embassy Residence, Asuncion, Paraguay Keyes, Smith, Satterlee & Lethbridge, Architects

More than any other, this design was affected by difficulty of transporting materials. Both buildings will be of reinforced concrete columns and slabs with native brick interior partitions and stucco on brick exterior walls. Due to extreme heat, humidity and tropical rainfall, both buildings will have wide galleries and roof overhangs with an umbrella roof above the main roof. The entire office building and sleeping rooms of the residence will be air conditioned. Retaining walls and drainage ditches will be necessary to prevent excessive soil erosion.



U. S. Embassy Office Building and Residence Tegucigalpa, Honduras Michael M. Hare, Architect

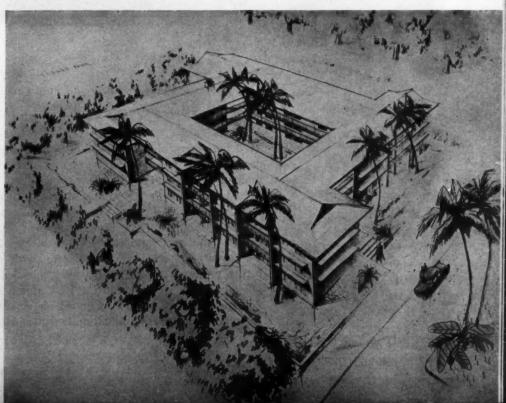
Office building and residence in this instance are on two different sites, the office building in the city, the residence on a high site some miles away. Both buildings are similar in design, and employ such native features as small wall openings, high ceilings, patios and verandas, using materials and construction typical of the country. Structurally both two-story buildings will be wall bearing with reinforced concrete floor and roof slabs. No air conditioning will be used, as the climate is "ideal."



U. S. Embassy Staff Apartments Manila, P. I.

Gardner A. Dailey, Architect

This apartment house, containing 30 units of from one to three bedrooms, is in effect four buildings around a planted court, joined together by interior corridor-balconies and a common roof. The open plan takes advantage of the prevailing breeze from Manila Bay. This will be the first of three proposed buildings on 23 acres.





U. S. Embassy Office Building and Staff Quarters, New Delhi, India Edward D. Stone, Architect

To achieve a formal expression of both character and dignity, the general design of the office building resembles the traditional Greek or Indian temple. The two-story building encloses an open aquatic garden, which is to be covered by aluminum stripping suspended on cables. All offices are one bay in depth and all corridors become open balconies fronting on the central garden. The design employs the surrounding podium of the Indian temples in that locale. Exterior of the office building is of ornamental perforated tile, marble and concrete, with concrete frame. Space for a future residence for the ambassador has been provided adjacent to the office building. Buildings in the background are apartments for the staff, and quarters for servants. Central air conditioning will be provided for the office building; individual units for the staff quarters.







U. S. Consulate General Office Building Lagos, Nigeria Weed-Russell-Johnson Associates, Architects

Designed for an enervating climate, the building exhibits a variety of sun control devices and venting ideas. Here the patio is designed as an entrance element, especially to serve the information center, which attracts many visitors. The library will be featured on the street side in window displays. Local stone will be used for facing.

U. S. Consulate General
Office Building
and Staff Quarters
Dakar, French West Africa
Moore and Hutchins, Architects
Georges Pellisier, Assoc. Archt.

So far as local codes permitted, the three-story office building and the apartment building were oriented on the site to catch the prevailing breezes; all living units have through ventilation. Buildings have reinforced concrete frame: exterior facing is Italian travertine, marble and some tile. The design incorporates a great deal of glass, and glass jalousies behind the sunshades. Stainless steel was used for rails and trim, aluminum for windows and frames.

U. S. Consulate General Hong Kong

Wurster, Bernardi and Emmons; Feltham and Cumine; Architects

The office building is to be built on the side of a hill opposite the new Secretariat of the Hong Kong government in Victoria, and will overlook the harbor. It is of reinforced concrete construction with native granite facing. It has a fifth floor penthouse for the Consul General and his staff, can add complete fifth floor later.



U. S. Embassy Office Building Djakarta, Indonesia Raymond and Rado, Architects

The office building, of two stories, will have a reinforced concrete frame, faced with marble and stone and concrete overhangs. Underneath the sun shades there will be sun louvers of metal. Behind the office building there will be a service building housing generators, cooling towers and a garage. The service area will be separated from the office area by high open-type stone walls enclosing a garden court with reflecting pool and tropical planting.

U. S. Consulate
General Office Building
and Staff Quarters,
Kobe, Japan
Leinweber, Yamasaki & Hellmuth, Architects

This complex of office building apartment house and combined servants quarters and garage, will become an interesting addition to the search in Japan for contemporary methods combined with Japanese qualities in design. Office building will be reinforced concrete and glass, with fiber-glass sunshades to cut off direct rays of the sun but keep the light and views. In the apartments, living rooms will have sliding glass doors to balconies.



THE DILEMMA OF ARCHITECTURE

by John Ely Burchard

Dean of the School of Humanities and Social Studies, Massachusetts Institute of Technology

OF ALL THE ARTS, architecture stands in many ways in the most difficult position for it is the only one which must serve pragmatic as well as spiritual utility. There is never any architecture until there is a building. There have been a few times, and only a few, in the history of mankind when man has been able to afford purposeless buildings. Most of the time the very cost of a building has insisted that it could not be useless.

It is in this necessity that the dilemma of architecture arises. For a building which will not serve its user well is a bad building. But though it is necessary that the building serve well in a practical sense, this is not sufficient. There is another necessity, that of delight. There was a short time in the history of functional architecture when we all insisted that if the function were really well served the delight would follow as a matter of course. We know better now and we probably always did know better. A building which works well but is without delight is quite as much a failure as a building which is visually pleasurable but works abominably.

Thus every architect must be partly a Mary and partly a Martha. In any one man one trait or the other is sure to dominate. Of late years we have tended to praise the Marthas the more and it is perhaps time that a little more praise be awarded the Marys. But a building which does not reveal something of both personalities will not be a great building. I shall shortly return to the question of purpose in buildings.

Besides purpose three other forces condition the resulting building or should do so.

Does it matter to a building whether it is on a hill or in the valley, whether the sun never shines or beats down incessantly, whether the leaves change with the seasons or are always green, whether the winds are capricious or prevail in one direction, whether the surrounding vegetation is tropical or temperate or arctic or non-existent? In early days there was no doubt as to the answer. The walls of Spain were thick and the windows small as firm defense against the sun; the roof of Egypt was flat so that the house-dweller might recline upon its top in the cool of the evening; the roof of North Germany was high-pitched to shed most of the snow so that it could support the burden of what remained; the house of New England huddled for warmth around its great central chimney and fireplaces; the high ceilings and the through hall of tide-water Virginia

made it possible to brook the humid heat of a summer on the James. All these things had their esthetics of course but they probably arose from practical considerations. Now it is hard to disentangle the pragmatic from the sensuous.

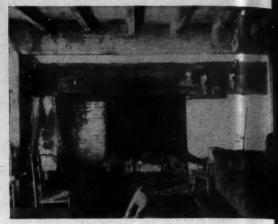
This is one of the tricky questions to consider as we go along. For modern technology has made many of the original practical considerations no longer relevant. You can successfully build a flat roof on a house in the Donner Pass if you want to, you can keep a thin-walled house cool in Spain, you can dispense with the fireplace in New England, although there are few of us prone to adopt these suggestions. Thus it is now possible to build a California house in the East and an Eastern house in California and to make both of them work, technically at any rate.

But it is still not certain that this ought to be done because after all logic has died away we do sense that even the miracles of modern engineering have not abolished nature, and that the building should have some relevance to the nature which surrounds it. People may not always agree as to what is relevant. Some think that a prairie house should lie flat on the prairie, others think the prairie needs contrapuntal pinnacles; some think that the pinnacle should enlarge the mountain as at Mont-Saint-Michel, others that it is precisely the mountain building which must nestle into the slope. But despite these major contradictions there is something, perhaps atavistic, that insists that the site and the climate do have something to say about what architecture is appropriate. In this sense there can be no such thing as a universal or transportable style.

Let me give one example. The national capital of Australia, Canberra, is set on a rolling hilly terrain, now brown, now green; the eucalypts are ubiquitous. In most respects it reminds one of a fine California landscape; it bears not the slightest resemblance to the misty and broad mouth of the James River in Virginia. Yet the United States, building its embassy on one of the most prominent hilltops of the Australian capital, has erected not a California house but something resembling one from Colonial Williamsburg. It was a disastrous decision by our country to build such a building. It is equally disastrous that many Australians like it. You see this is not even a question of contemporary or old, but of commodity to a site. Contemporary architectural thinking is certainly aware of and even







3 Samuel Chamberlai

"The walls of Spain (1) were thick and the windows small as firm defense against the sun . . . the roof of North Germany (2) was high-pitched to shed most of the snow . . . the house of New England (3) huddled for warmth around its great central chimney and fireplaces; the high ceilings and the through hall of tide-water Virginia (4) made it possible to brook the humid heat . . ."

enamored of technology. Still it has sought again to understand the site rather than to force a universal solution.

Materials must obviously exercise a profound effect upon the building. Again historically the materials had to be indigenous. Sundried bricks were used in dry and treeless Mesopotamia; stone in Greece and Rome, where there were timbers to be sure but not good ones in profusion; wooden architecture arose in wooded places. It was not always the case that the local material was desirable for the local need. For example, though wood is everywhere in the tropical rain forest, it also deteriorates rapidly there. But the over-riding consideration was historically one of supply.

Think how few major building materials there really are; wood, brick and stone were the great three for thousands of years. Stone was burned to form plasters which when applied resumed the quality of stone. Bricks were burned in kilns instead of by the sun and thus other ceramics were developed but the tiles and terra cottas which emerged were used primarily for decoration or finish. Glass was used at first as a luxury and for esthetic purposes which culminated for a while in Sainte Chapelle in the thirteenth century and arose again in the greenhouse architecture of the Crystal Palace in 1851. Lead was used early enough for caulking joints and shedding rain. Copper and wrought or cast iron were used for decorative purposes or in minor functions as railings. But through all this time there were really only three basic materials - wood, brick and stone, with glass perhaps offering more suggestion than realization.

Then in the last hundred years we have added a few more, a kind of synthetic stone in the form of reinforced concrete which is more plastic than stone has been heretofore, steels which suggested hitherto impossible structural opportunities, most recently metals which can themselves be used as wall-facing materials. Thus today we have six materials of major importance where the long ages had but three, and I would not quibble if you said there were eight and not six today, since glass is almost certainly a material of enormous importance to the builder and it is possible, though not certain, that the future of plastics is not far away.

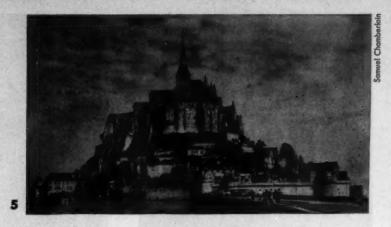
As the use of simple materials became more general. artists sought variety. Some variety, even great variety, is of course possible when transportation is available for there are enormous local differences in timbers, in clays, in stones, even in glass. But until very recently the artist architect was somewhat bound by economics to the use of what was available locally. Only the opulent client could import from afar and indeed the opulent client of the nineteenth century, abetted by the architect of that day, did often import less for the esthetic purpose than to demonstrate that he could import, again verifying Bevlen's theory of conspicuous waste. But for the most part local architects found outlets in modifying the materials, shaping them into forms, revealing unusual textures, or often and nobly yielding them to the ministrations of painters and sculptors. Even those architectures which we think of as the purest were not free of these ministrations. The Parthenon had sculptured friezes, and in polychrome moreover; the detail of the triglyphs, the metopes, the guttae, the column capitals and bases were not regarded as trivial. Yet some of these details were vestigial from wooden details and some were plainly fantasy. They were none the less beautiful for that.



Contemporary architecture is not seriously shackled by the limitations of economic transport. Very few buildings of any importance are now wholly constructed of indigenous materials. Almost the world supply of building materials is available throughout the United States at no very high premium for the use of the exotic. Moreover, the nature of modern American production is such that the architect may ship even unexotic materials or assemblies from long distances. The entire range of American resources provides his minimum palette, no matter where in America he lives and works. Thus technology in this matter as in the matter of climate and geography has freed the hand of the architect.

This freedom of course imposes a responsibility which has on the whole been well exercised. The effect of freedom of choice has been to diminish the desire to rework the materials, to increase the effort to let the materials stand for themselves and to seek effects by strong juxtapositions of unlikes, of wood and stone, of steel or concrete and glass. The fascination with the materials and with the framework, confronted by municipal fire laws, has even led at times to designs which purported to display simple materials and structures when they really did not. This is not honest but it is no more harmful, if the esthetic motivation is candidly admitted, than were the stone triglyphs and guttae, residues of wooden construction, on Greek temples; no more dishonest, but no less so, either.

Besides the place and the materials, there is the question of the times. There is such a thing as a Zeitgeist. It is partly a matter of the technological life that is led and we must always remember that every new convenience brings a new inconvenience. When jets crowd





"... some think that the pinnacle should enlarge the mountain as at Mont-Saint-Michel (5), others that it is precisely the mountain building which must nestle into the slope (6)."

the skies we will move faster from place to place but there will be fewer places over which the heavens will always be quiet. We have perhaps accepted the handicaps of technological progress as being too inevitable and we are likely to seek relief from their pressures by a synthetic ruralism almost in the manner of Rousseau. But we do live in the twentieth century and not the fifteenth or the twenty-fifth. And our century has its positions, not all technological. And these positions must be reckoned with in our buildings if they are to be successful. The people of the great periods often admired the work of an earlier period but this is quite a different thing from trying to turn back the clock.

The problem of the times as it affects architecture has been well summarized by Thomas Merton in *The Sign of Jonas*. This is what he says about church architecture:

"The perfection of twelfth-century Cistercian architecture is not to be explained by saying that the Cistercians were looking for a new technique. I am not sure that they were looking for a new technique at all. They built good churches because they were looking for God. And they were looking for God in a way that was pure and integral enough to make everything they did and everything they touched give glory to God.

"We cannot reproduce what they did because we approach the problem in a way that makes it impossible for us to find a solution. We ask ourselves a question that





"The Cathedral of Bourges serves the Mass quite as well perhaps

they never considered. How shall we build a beautiful monastery according to the style of some past age and according to the rules of a dead tradition? Thus we make the problem not only infinitely complicated but we make it, in fact, unsolvable. Because a dead style is dead. And the reason why it is dead is that the motives and the circumstances that once gave it life have ceased to exist. They have given place to a situation that demands another style. If we were intent upon loving God rather than getting a Gothic church out of a small budget we would soon put up something that would give glory to God and would be very simple and would also be in the tradition of our fathers. That is why the best-looking buildings around Gethsemani are the barns. Nobody stopped to plan a Gothic barn, and so they turned out all right. If they had built the gatehouse on the same principles as the hog house it would have been beautiful. Actually it is hideous.

"However, the twelfth-century Cistercians took good care to be architects. Saint Bernard sent Achard of Clairvaux out to study the village churches of Burgundy and see how they were built. And it is true that there was a clean kind of mysticism in the air of the age that made everything beautiful. One of the big problems for an architect in our time is that for a hundred and fifty years men have been building churches as if a church could not belong to our time. A church has to look as if it were left over from some other age. I think that such an assumption is based on an implicit confession of atheism—as if God did not belong to all ages and as if religion were really only a pleasant, necessary social formality, preserved from past times in order to give our society an air of respectability."

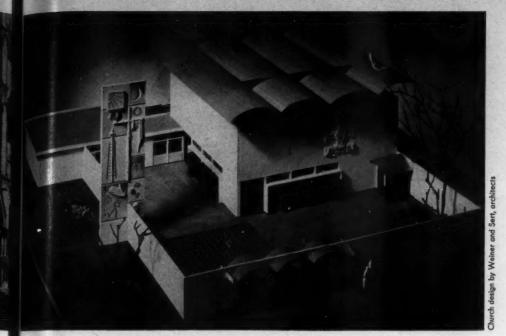
This seems obvious to many of us but unfortunately it is still far from universally clear.

1 Thomas Merton, THE SIGN OF JONAS, Harcourt, Brace and Company, New York, 1953, pp. 36-38.

Now if indigenous necessities have been diminished by technology and buildings are no longer limited by the local availability of materials and if they are to be buildings of their time, it might appear that something universal would develop in Western architecture. It was this sort of thing that people have had in mind in praising or castigating what was never really existent, the International Style. That is, it was existent only in the same sense that every other great style which has prevailed has had an international quality. Greek temples adorned hillsides far from the Aegean. Roman atria were built in misty England. The Gothic of France turned up later in Cologne and Milan. The Renaissance of Italy could be found in France and in Spain and in England. The work of the brothers Adam was imitated in climates very different from that of London - in India, South Africa, Australia, New Zealand.

The point to notice about this is that the great styles did spread from a center which was in some way at the moment the center of the cultural thrust in the broadest possible terms, in a military and an intellectual and a political and an economic as well as in an esthetic way. As the buildings were built in the outposts they were, to be sure, seldom as fine as those in the home land. If they were built by weak men they were shallow copies of what was being done better in the land of origin. If they were built by strong men they gradually took on their own characteristics. But they remained within a general tradition of purpose, of materials, and even of detail. Still only the unsophisticated could confuse an English Gothic with one of France, much less with one of Germany or Italy. And so it has always been. So it was with the International Style, if there was any such thing.

Not the least challenging of America's present ques-



THE DILEMMA
OF ARCHITECTURE

as the latest modern church in Brazil . . ."

tions is the wonder whether, standing as we now do at the heart of the economic, military, political and even to some extent the scholarly power of the West, we will decline the role which has traditionally gone with these others or else play it badly and let the esthetic mantle fall elsewhere. If the United States Congress were to have its way this might happen. What we build abroad ourselves may be controlled by the Congress but what we build here cannot be. And it is what we build here that will decide finally whether we furnish esthetic leadership. For it is better for a style to be transferred to another country by the builders of that country. Great thinker as he may be, the Swiss Le Corbusier will never think as a Hindu; brilliant designer as he is, the Finnish Aalto will never design as a Brazilian. So to use the term "International Style" as Mr. Philip Johnson seems to have done, to indicate a special domain of contemporary architecture which must not be invaded or polluted, is to act against all the evidence of history; but to use it as a term of reprobation as Elizabeth Gordon has done is to ignore the inevitable ripples which have always spread through the world whenever something important has been said anywhere.

Let me return now to the use of the building. As I have suggested, this use cannot be described in exclusively technical terms although this has been the pretense of some of our great contemporary architects. The plain fact is, of course, that very old buildings which we would not build now but which have survived are often very habitable. They are habitable even with archaic heating and lighting and plumbing systems and without big windows opening upon the land-scape. The cathedral of Bourges serves the Mass quite as well perhaps as the latest modern church in Brazil or the Pyrenees.

But needs are partly functional and it was the crime of the eclectic architects of the nineteenth century that they forgot this altogether. If a sermon is the most important part of a religious service, as it is in some Protestant denominations, it is a crime to build a sanctuary which no matter how mystic offers nothing but reverberations to the preacher. And it is one of the great glories of the Roman Catholic Church that on the whole and with only modest wavering it has often chosen to build in the language of the current times. It is a crime to build a public library in the manner of the Farnese Palace if in so doing you make it impossible to find a book, to borrow it, or to read it. It was the kind of thoughtless excess that forced the revolution in architecture which began long ago but reached a crescendo in the early part of this century, the fruits of which are now blooming as the contemporary architecture of America.

When you are fighting a serious revolution you must be pure in your own attitudes. If iconography and details from the past are counter-revolutionary you must tear them down. If history may be cited against you, you must be opposed to history. If the proliferation of art on buildings is called for only by bad architects who use bad artists, then you may not use painting and sculpture to embellish your buildings. You seek first purity of line and principle; you overemphasize engineering and utility; you put washbasins nakedly in foyers; you adhere to purity knowing that to yield at all will corrode your entire effort.

And when you produce this clean-cut break, this antiseptic design, so different from anything any of your contemporaries are used to seeing, much less admiring, you need all the supporting arguments you can find. You sense the weakness in eclectic architecture to have



"... the good work of peasants everywhere, the people who build beautiful houses in Tibet (8) and in the Swiss Alps (7), in Norway (10) and in the Congo (9), good works because they are honest ..."

been twofold; one, esthetic incompetence, the other, functional failure. The argument on esthetic grounds is complex and hard for everyone to understand. But the argument on function is practical, it appeals to commonsense. So you start talking about form following function, and the house as a machine for living. Sometimes you even come to believe it altogether.

The fact is of course that you should believe it only in part. Modern buildings do sometimes work better than their predecessors. But not everything that goes into a modern building goes into it for practical reasons. Not every new chair, free form, or wall of glass is practical or sensible. Do not convince yourself that they ought to be. A much cited architectural writer, Vitruvius, said long ago that a great building must have firmness, commodity, and delight. The delight is not unimportant — and it will not always be rational. It is the great hope of contemporary architecture in its advance towards historical importance that it has finally become possible to do some things irrationally. It is of less hope that it still seems necessary to persuade some of the buyers of these ideas that they all rest on rational grounds.

What I am suggesting here is that the needs of a time are a combination of the rational and the irrational; some things must work physically; others are plainly symbolic or mystical; the mystique may be that of a medieval Last Judgment or of the modern hunger for an unimpeded space in the manner of Chirico. Great architecture will provide for these irrational needs and tastes while not making it too difficult to meet the rational physical requirements. Indeed, the main reason I believe that contemporary architecture has come of age is

because it is recognizing this principle implicitly in the explanation of their work.

As a result of all this I hope you will agree with me that we are fortunate to live in a time when our architecture is so vital; that this architecture is not only strong and commodious but that it is often beautiful; that it is something to be happy about now while we live in it and to have some confidence in as our legacy to posterity. This confidence can be reinforced, I suggest, by the understanding that this architecture is not some strange and warped and incoherent diversion of the stream of our heritage but rather a continuation of the flow of that stream. It can compare favorably with the good work of peasants everywhere, the people who build beautiful houses in Tibet and in the Swiss Alps, in Norway and in the Congo, good works because they are honest and use simple materials simply. It can also compare favorably with the great times of Western architecture, with the times of Greece and Rome and Byzantium, with the Romanesque, the Gothic, the Renaissance, the Baroque, and the Georgian, - great times because they solved complex problems superbly, used structures boldly, exploited materials magnificently, met and expressed the challenges of their day. In examining the architecture of our times, and especially in examining the architecture that the next decades will present, it is wise to greet it with an affirmative effort to understand and believe; but if that is not possible, then at least one should say, as Hamlet did in the fifth act:

"If it be now, 'tis not to come; if it be not to come, it will be now; if it be not now, yet it will come: the readiness is all."

4 STORES

Carson Pirie & Scott Store; see following page

PENTAGON—ENTRANCE MALL—BENT STRIP

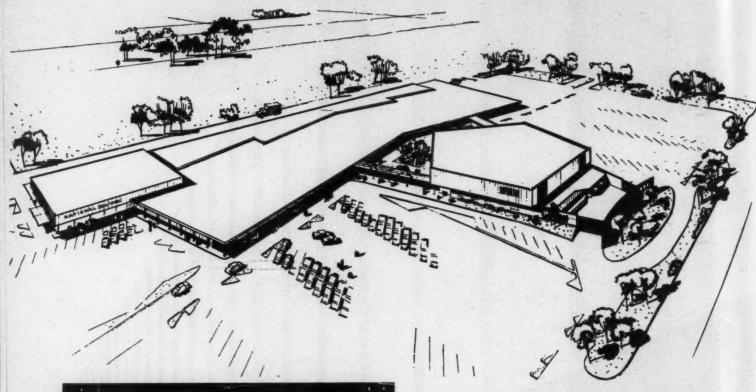
Store for Carson Pirie Scott & Co.
Woodmar Shopping Center, Hammond, Ind.

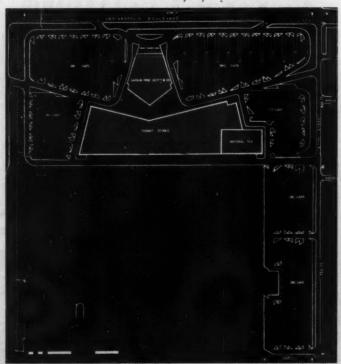
Landau and Perlman, Developers

Victor Gruen Associates, Architects
Karl Van Leuven, in charge

Sidney C. Finck, Associated Architect

George W. Barton Associates, Traffic Consultant
Inland Construction, Inc., Builders





THE PROBLEM was to place a department store, some 30 other stores, and parking for 1200 cars on a long, narrow, 18-acre site. The quite unusual result illustrates several sound planning ideas and holds considerable architectural interest.

The key to the scheme lies in pulling the department store forward to the highway and then turning it backwards with concealed front service and rear entrance. Its pentagonal form yields two glazed entrance and window-shopping walls facing a landscaped mall — this mall becoming the heart of the plan. The smaller store block faces the mall and the dual parking; is serviced from a rear drive; but this strip has been bent into a flat V for several very good reasons. The dihedral shape provides a more intimate relationship of all stores, shortens walking distances, and forces pedestrian traffic into the desired pattern, i.e., past the smaller stores and toward the department store. All stores are raised above the general street pattern for greater visibility from the highway.

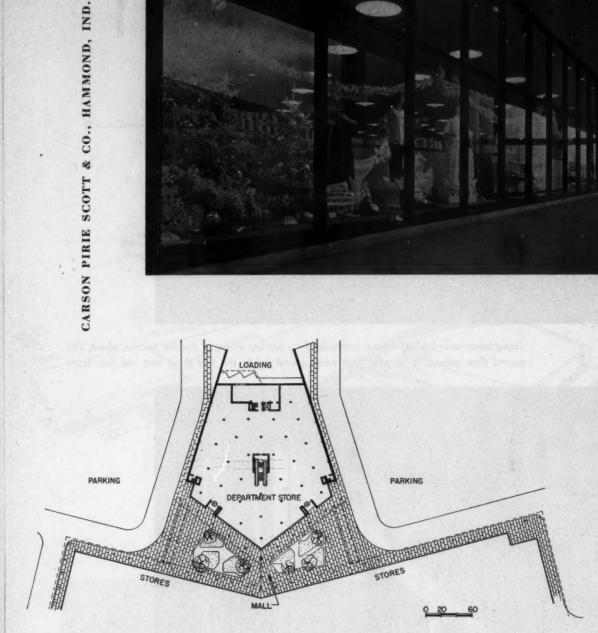


Department store loading area is concealed by a curving screen of wooden louvers, above. The second floor volume is covered with white glazed brick; the first floor with red face brick

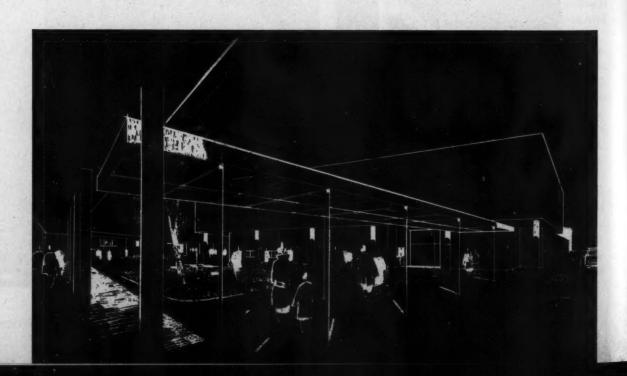


Il photos (including p. 202) Hube Henry, Hedrich-Blessi





The two sides of the pentagonal department store which face the landscaped mall at ground level are completely glazed, the surrounds being aluminum finished in matte black. At the two entrances adjacent the terminations of the two covered walkways, vertical piers are sheathed in white tile mosaic to add sparkle. All pedestrian walkways in the center are protected from the weather



BLOOMINGDALE'S NEW STAMFORD BRANCH

Bloomingdale Brothers
Stamford, Conn.

William T. Snaith, Architect for Raymond Loewy Corp., Designers The Austin Co., Engineers & Builders Helen Wells, Store Designer for Bloomingdales



Gottscho-Schleisner

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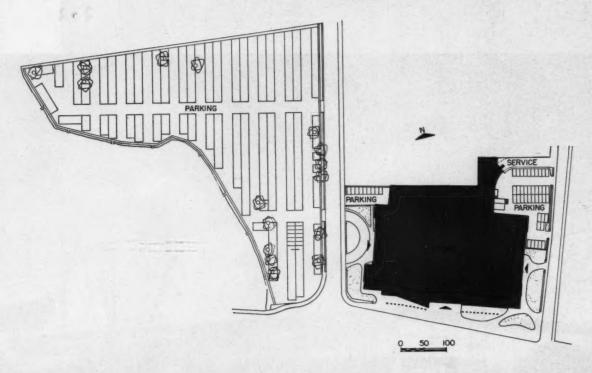
in Id in

The site for Bloomingdale's third and largest branch, located in a region of pseudo-Colonial houses and "country living," comprises about 85,000 sq ft and is bounded by three streets. Designing a modern department store for such an environment presented a challenge; for a stark, blank-wall and glass box was considered inappropriate—an essay in Colonial eclecticism insincere. This design tackles the problem by incorporating certain of the thinking from both directions; offers one kind of answer for an all too typical situation.

A natural six-foot differential in level was built up to make an incline to second floor level for delivery. Trucking takes place on this ramp, the beginning of which is at the extreme right in the picture above. The lengthy façade extending 350 ft along Broad Street might have been, in strictly utilitarian terms, a monotonous strip of blank masonry and glass lacking both in proper scale and character for its surroundings. As executed, the design establishes a vertical-patterned mass of rock-faced salmon pink brick as a strong central element from which extend the two white painted brick wings.

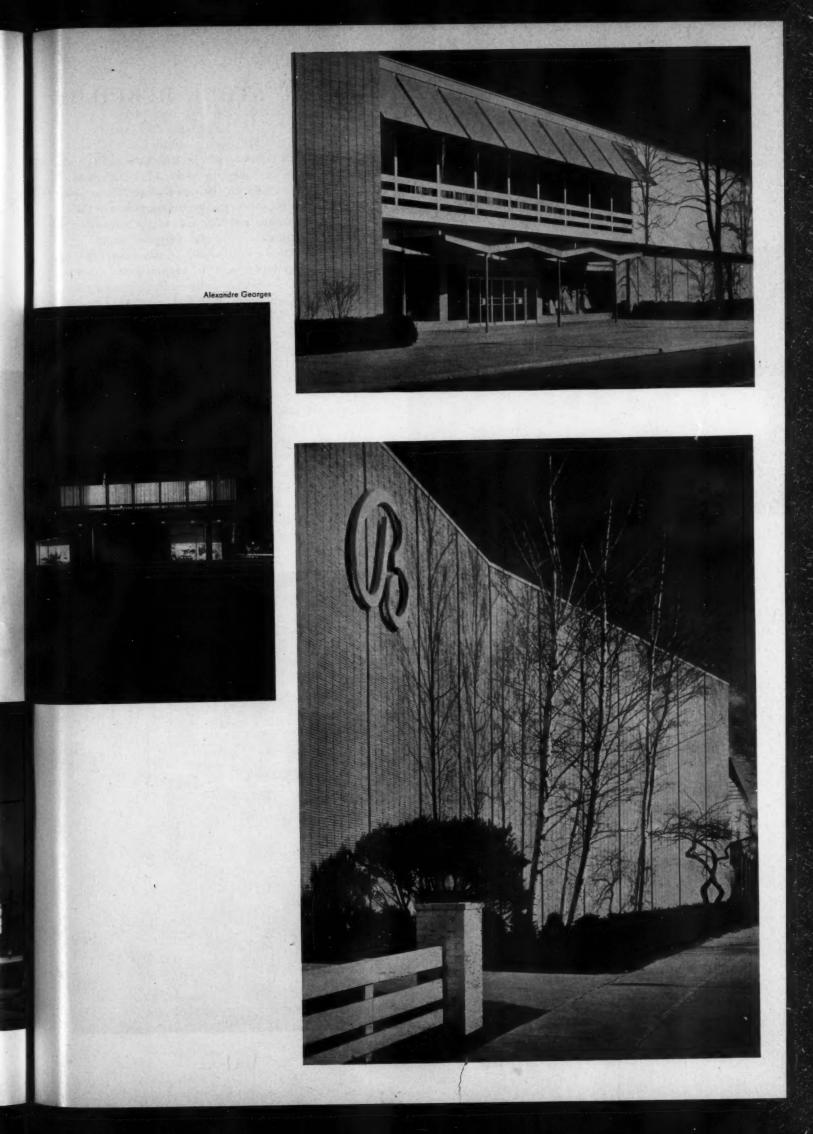
The three entrances are sheltered by natural teakwood canopies. The cantilevered balcony at the principal corner (shown below and at near right) contains the Chanticleer Restaurant.

Materials, finishes, equipment: aluminum store fronts and entrance doors; terrazzo floored vestibules; sales floors of rubber tile or carpeting; ceilings of painted plaster or acoustic tile; interior spaces sprinklered and air conditioned; lighting is by a combination of incandescent and fluorescent fixtures.



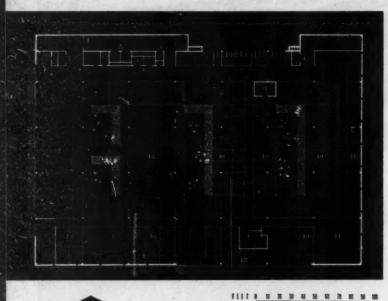
3 photos by Gottscho-Schleisner





NETHERLANDS DEPARTMENT STORE REBUILDS

De Bijenkorf (The Beehive), Rotterdam Marcel Breuer — A. Elzas, Architects Daniel Schwartzman, Consultant



DISASTROUSLY FIRE-BOMBED by the Nazis in 1940 and serving its customers in makeshift quarters since then, the 85-year-old De Bijendorf department store plans to open its striking new building in the fall of 1956. The structure will face one of the entrances to Lijnbaan, Rotterdam's planned shopping plaza.

Its reinforced concrete slabs, of mushroom design, will require no joists; will be supported on columns spaced at 39 ft to provide maximum clear interior space. The gross area will be 387,000 sq ft.

The ground floor show-window strip — 262 ft total length — will be framed in Portuguese granite; while the closed upper floors — the first in Holland — will be faced with striated Italian travertine in a symbolic honeycomb pattern overlaid with widely spaced vertical lights. At one corner (nearest in the top rendering) an abstract sculpture by Naum Gabo will extend from show-window soffit to parapet.

In terms of the typical American department store, there will be several interesting features in the scheme. There will be a glass-enclosed automobile showroom (see plan and bottom rendering); a small cinema (recessed element, top rendering); offices and employes' facilities that open to roof gardens (4th floor plan).

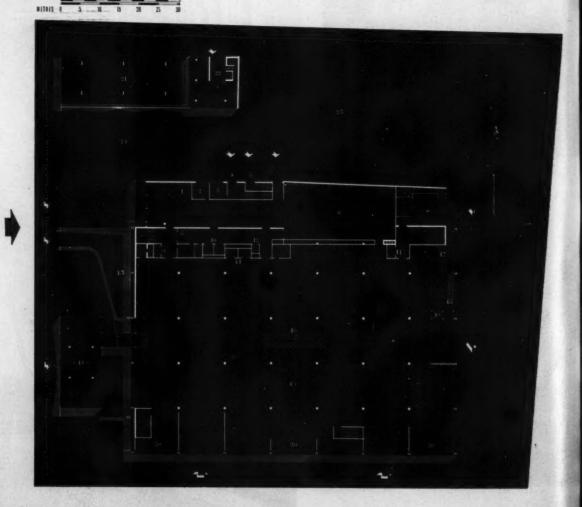


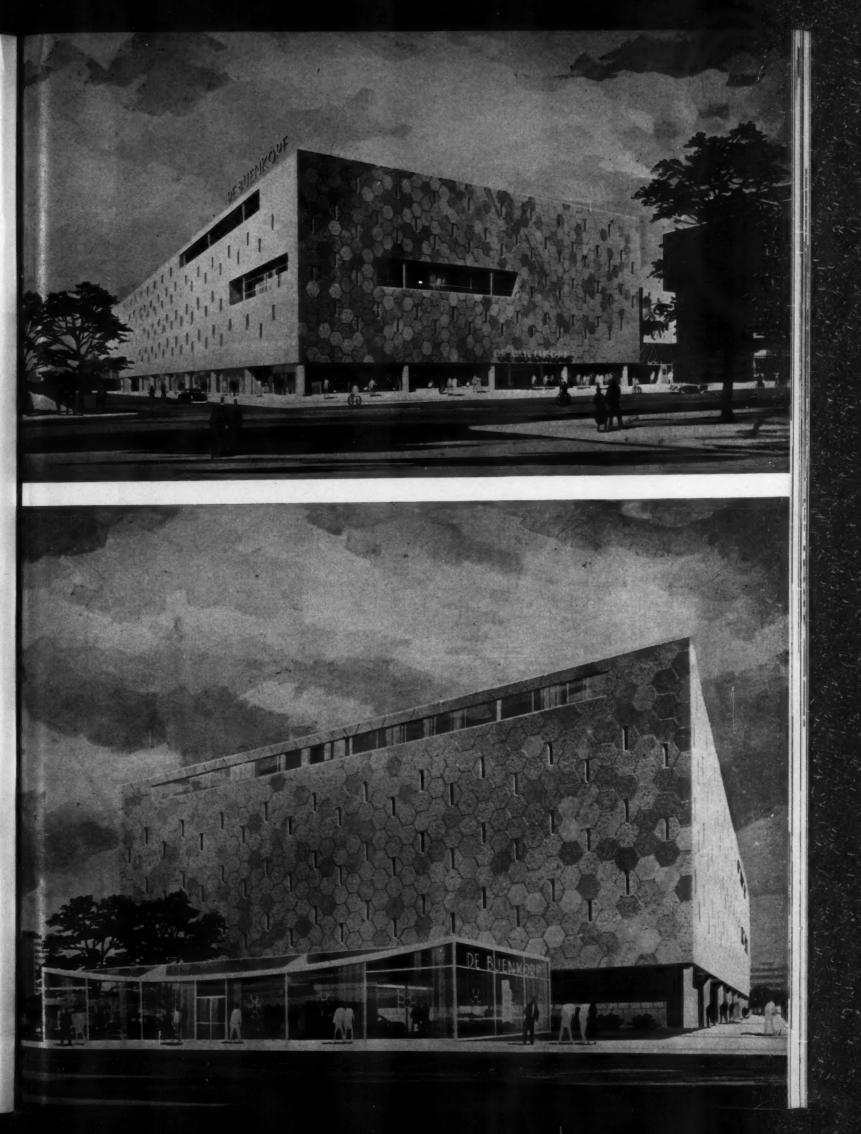
FOURTH FLOOR

- 1. Passage
- 2. Employes' Elevator
- 3. Freight Elevator 4. Public Elevator
- 5. Kitchen Elevator
- Workshops
- Rest Room
- 8. Executive Canteen
- 9. Vault
- 10. Officer
- 11. Storage Rooms
- 12. Personnel Canteen
- 13. Loggia 14. Lockers

GROUND FLOOR

- 1. Receiving Department
- 2. Office
- 3. Control
- 4. Employes' Entrance
- Public Entrance
- Accounting
- 7. Cinema
- Employes' Passage
- Employes' Elevator
- Freight Elevator 11. Public Elevator
- 12. Kitchen Elevator
- 13. Basement Drive-in
- 14. Auto Show Room
- 15. Main Sales Area
- 16. Escalator
- 17. Basement Entrance
- 18. Basement Exit
- 19. Showcase
- 20. Displays
- 21. Bicycle Parking
- 22. Office Building Lebby
- 24. Auto Parking













THREE-LEVEL PARKING AND RETAILING

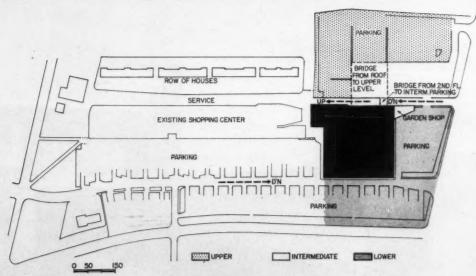
The Hecht Co. Store
Baltimore, Md.

Abbott, Merkt & Co. and Daniel Schwartzman, Architects Consolidated Engineering Co., Contractors BY TAKING ADVANTAGE of a natural slope it was possible in this suburban store design to arrange both parking and selling areas at three levels. A feature of the scheme is roof parking immediately adjacent the restaurant, which remains open for business during weekends when the store is closed.

The structure is located in a residential area densely built up in typical Baltimore fashion — this density relieved here by a nearby college campus and park. In an effort to achieve a suburban character, the design called for natural field stone and white painted brick for exterior finish, with turquoise color for the columns, awnings and lettering.

The gross area of the store is 155,000 sq ft, and its cost was \$15 per sq ft, exclusive of site work.









Ben Schnal

Use of natural stone, white repeats, and light finish bronze on interior — as well as "look-through" windows — help establish the interior-exterior relationship of the scheme. In the lower photo can be seen the garden shop, a separate wing framed in wood and sheathed in vertical boards to recall the character of garden structures. Ramp leads to truck dock.





CONTEMPORARY ART IN A REMODELED THEATER

Faxon' & Gruys, Architects

Once upon a time the Mondrianesque movie theater whose façade appears at the right and on the following pages was a neo-Karnak palace. Even its name was *The Egyptian*. Now, its former impressive gloom replaced by light flooding through its glass wall (even the ticket-seller sits in a glass jewel-box), in its lobby is a gallery showing the best examples of contemporary painting and sculpture the owner can procure. Appropriately suspended from the lobby ceiling are bronze stars sculptured by Bernard Rosenthal. Its seats are new and ultra-comfortable. The movies it shows are of high quality; they are booked for runs of several weeks so busy people who really want to see them can plan ahead at leisure; and there is just one feature picture. The Capri's owner, Burton I. Jones, an experienced movie-house owner as well as a connoisseur, has found that this approach pays.







CAPRI THEATER

The old Fox Egyptian, whose portrait appears at the left, is hardly to be recognized in its suave new façade (above). True, this is just a remodeling job in which no great technical problems arose. Yet it does exactly what it should for the intelligent San Diego audience its owner wishes to attract, and it is successfully competing with numerous new drive-in theaters. Frank Gruys, its architect, obviously enjoyed himself while he was designing it. He is happy with the results, and so is the owner.

On its typical city street the Capri sends out a blaze of light after dark, and during the day its brilliantly colored lobby is wholly visible from the sidewalk. The traditional marquee has become an unobtrusive canopy. At the rear of the lobby is the gallery with special lighting for the continuing exhibition of contemporary painting, sculpture, etc.

Even the turnstile at the glass ticket booth is quietly worked into place; a simple sign announces the feature. Rosenthal's bronze stars dominate the lobby, both symbolizing light (and that American invention, the movie star) and casting a dramatic shadow that beckons to the shadow play within. While the stars were being hung the owner said to a hangeron: "Most people don't realize that when they think of a five-pointed star they're thinking of an abstraction. This star is more like the real star you see in the heavens; it's more realistic. Your five-pointed star is really the abstraction." The kibitzer, we understand, was converted.









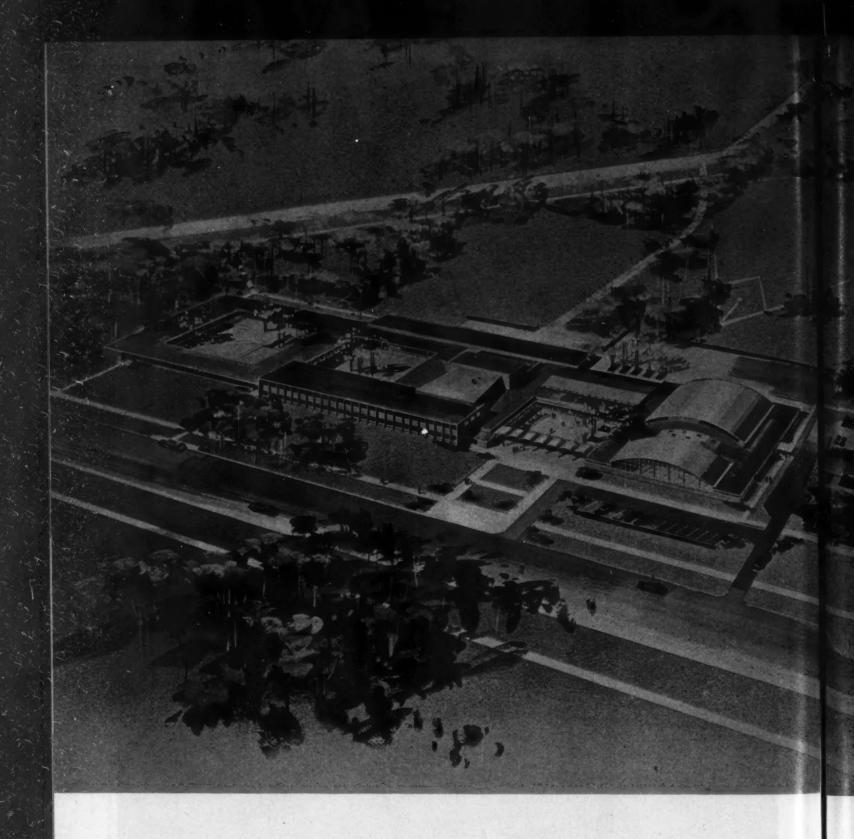
Julius Shulm



Primary and near-primary colors in the lobby are brilliant against clean white surfaces broken by black lines (photo above). At right, Bernard Rosenthal, sculptor of the lobby's bronze stars, at work. At far left, two photos show exhibit space leading to the auditorium, whose interior (center, left) was little changed except for installing comfortable seating and air conditioning, widening the screen, etc.



Nichole



LARGE HIGH SCHOOL IS BOTH PRACTICAL

Edsel Ford High School, Dearborn, Michigan; Eberle M. Smith Associates, Architect-Engineers;



A GOOD MANY YEARS AGO Henry Ford recreated, in five of the reconstructed historic buildings at Greenfield Village in Dearborn, the small, personal sort of school he had known as a child. One of the buildings is the Pennsylvania log cabin where William Holmes McGuffey, of McGuffey Reader fame, was born.

Today, less than a mile south of Greenfield Village, the city of Dearborn is building the great new Edsel Ford High School shown on these pages. At first glance this new secondary school plant is farther removed from the one-room school than the 1955 automobile is from the Model T. The contrast emphasizes how many more children we try to educate in these days than we did in the 19th century, how much more there is for them to be familiar with today, how much more money we spend per child and in toto on this job, how much educators have learned about the educative process itself and — not to be overly modest — how much architecture can enhance the process. So prominent a position does education occupy now in the public mind that we may sometimes forget that, for years prior to the end of World War II, one did not ordinarily regard it as a pressing problem unless one's own children were having difficulties.

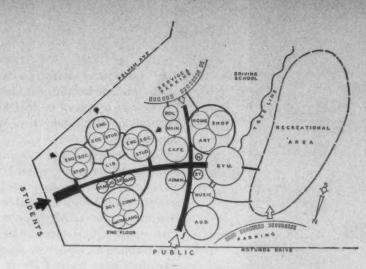
Fortunately most educators and a number of architects were meanwhile substantially occupied with the problems of evolving educational concepts and appropriate buildings to house them. True, most of the emphasis was placed on elementary schools, almost—it seems—without realization that the elementary school child would soon reach high school age, that the birth rate was zooming up, and that more youngsters were tending to stay in school more years. The secondary school now looms as a nation-wide problem of nearly the proportions the elementary school problem had attained only five years ago. Size, cost and nature of the secondary educational program are only three of the horns of this multi-pronged dilemma. Unit schools, campus plans, finger plans—all have been employed; too often, the high school building of the Twenties has merely been enlarged into a monstrous, inhuman monument. At times, too, each of these approaches to the design of a high school has been appropriate; no two school situations are alike and no two design concepts can be expected to be identical.

The Edsel Ford High School is an inspiring design of a nature both familiar and new. It retains the compactness and even the impressiveness of the prewar high school, gaining thereby a unity of purpose and some qualities in which the community's children and adults alike can take pride — gains which some excellent contemporary high schools might be criticized for not having achieved. At the same time, much of Dearborn's new building is low, informal and, as the verbal cliché goes, "human in scale." Economy and appropriateness for this particular design worked hand-in-hand, however (as in good architecture they must), to cause some portions of the school plant to take on a second story and others almost to demand the application of highly imaginative structural techniques. Over the two gymnasiums and the swimming pool are thin-shell barrel vaults, concrete shells only 5 in. thick at the crown, spanning in one instance a room 130 by 110 ft. This type of construction, seldom attempted in this country, is here used for the first time in Michigan; these are the largest "short" barrel vaults in the United States.

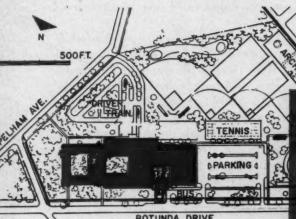
But the design is noteworthy for sounder reasons than bigness alone. Its plan is a positive reflection of the Dearborn school system's educational program. Learning is a process which, particularly in an industrial environment, needs to be made a pleasant, friendly, eagerly awaited experience to the student. On the other hand, economics dictated that this school must be planned for 1200 students, with the certain knowledge that, until more secondary facilities now envisioned could be built, at least 1800 would occupy it. The practical

AND INSPIRING

DEARBORN HIGH SCHOOL



Many studies preceded as well as accompanied actual designing. Above, in bubble-diagram form, is represented the organization of activities and areas as determined at one time. Site layout and building design developed from this, improving as fresh possibilities were realized

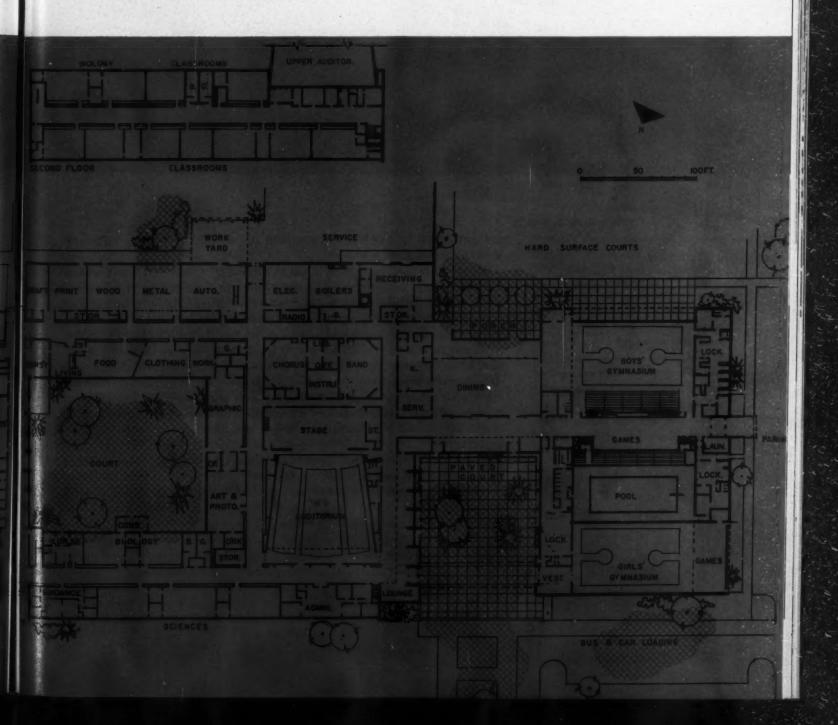


ROTUNDA DRIVE

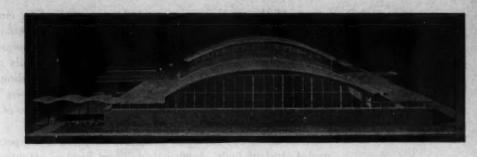
Of the fifty-acre site, twenty acres are heavily wooded, the remainder, mostly in the center, is open and was selected for games and sports fields. There was ample space for a one-story building scheme, although for certain portions two stories seemed best. The plan, right, was developed to accommodate the educational trend in Dearborn toward increasing emphasis on the "common learnings," and to provide a highly integrated activities program. Note the large student work center where cooperating classes may gather to use special equipment for projects. As this teaching technique expands, areas now labeled "multiuse" may become work centers

aspects of the problems size created were resolved by employing recognized architectural devices: movable, prefinished wood cabinets in a great variety of types, for instance, but all constructed to modular dimensions so they can be shifted and reorganized easily; demountable, acoustically retardant classroom partitions of steel, likewise easy to rearrange; free-standing steel corridor lockers; continuous perforated metal-pan ceilings, of "snap-on" type, in classroom areas, with radiant heating piping above and two inches of glass fiber over the piping for both thermal and acoustic purposes.

These meet the need for flexibility imposed by expected fluctuations in size of student body. A special, different kind of attention has been paid in design to the problem of making the student feel like a human being among other human beings. The entire building complex is planned around a series of courts, which sounds rather anticlimactic after the emphasis we have placed upon it. An examination of the plan indicates, on the contrary, its great importance. Here again both the imponderable and the practical helped to determine design decisions. To wrap the building units around a series of courts eliminates dead-end corridors, encourages two-way circulation and provides a focus for each group of related spaces. For economy, the "end-on" classroom, deeper than it is wide, was used; it could be since in one-story areas glass block

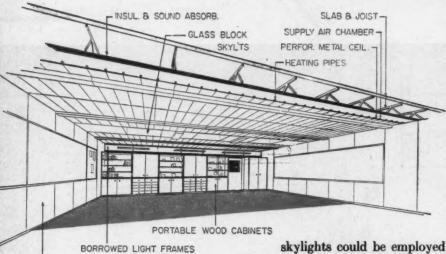


DEARBORN HIGH SCHOOL









Classroom cabinets are of 4 basic types; there are 20 variations. All a modular dimension, 4 ft, they can be moved and interchanged; they are made of birch, prefinished in a furniture factory. Nearly 700 of these are required for the school, plus numerous special cabinets. Metal classroom partitions are movable, insulated to reduce noise transmission. Metal ceiling contains radiant coils, acoustic absorbent

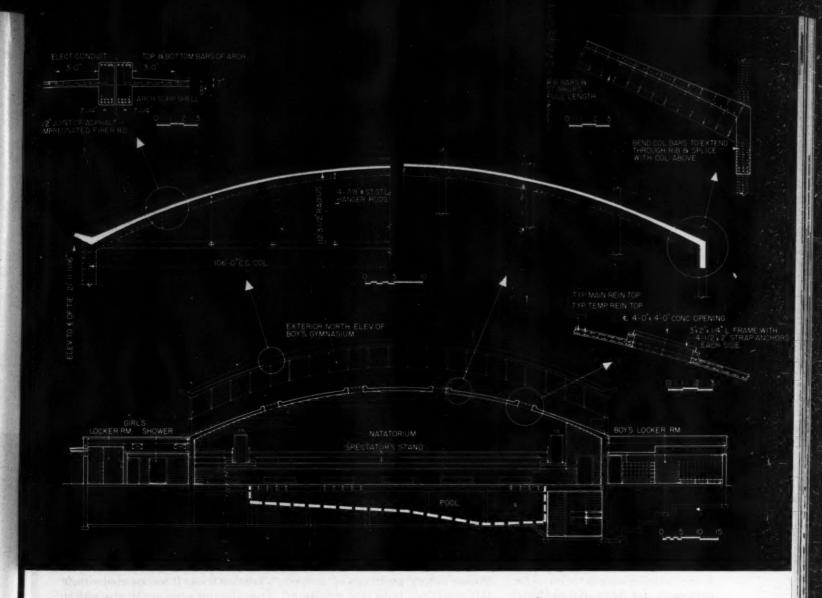
skylights could be employed to maintain the desired 30-ft-candle minimum level of natural illumination.

At the left of the plan is what might be called the "quiet court," and around it are the more academic classrooms where noise elimination is necessary. Here, too, is the library with its seven adjacent conference, reference and phonograph-listening rooms, and an outdoor reading terrace. "The rooms surrounding the tree-shadowed quiet court," say the architects, "are by intention more cloistered than other portions of the school." In the center of the plan is the "project court," focus for the creative, active parts of the curriculum; grouped around this are classes which can take advantage of the outdoors such as: art, photography; biology, with greenhouse and horticultural beds; and in one corner a nursery school where girls in home-making courses may observe small children through one-way-vision glass, and at times assist in their care.

At the plan's right is the "social court," which not only provides access to parts of the school open to public use, but is also to function as a student forum. Its paved areas are relieved by planting beds; on one side is the student lounge and on another is a game area next to the dining room, for noon-hour recreation. In the dining room students will sit in groups of four to six, not at institutional boards; when the room is cleared of tables, 400 can be accommodated at a dance. The room's full-height sliding glass walls open to the student forum on one side and to a sheltered outdoor eating porch on the other.

Between the "quiet" and "project" courts is a group of areas accessible to the entire school population, including the library, student work center, teachers' lounge and work center. The organization of spaces around the 900-

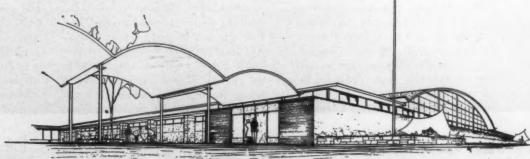
MOVABLE METAL PARTITIONS



seat auditorium is also convenient: band and chorus rooms are directly accessible for ease in handling musical ensembles; beneath the stage are dressing rooms; nearby are the art room and the clothing laboratory so stage sets and costuming can be executed close to their point of use. The five types of shops are toward the rear of the building for noise reduction and easy service; guidance rooms are adjacent to the health suite; the sciences are grouped for proper interrelation and to share offices and storage rooms.

In developing the 50-acre, partly wooded site, the 30-acre center portion has been laid out for nearly every sort of game with, perhaps, more than the usual emphasis on sports that can be carried on into adult life. These recreational facilities are available to the entire community. The expected cost of site development is about \$350,000 including bleachers for 1500, temporary seating for 1000 more, and parking for 450 cars and 600 bicycles. This compares with the \$70,000 cost of the modular classroom cabinets previously mentioned; or with the 15 per cent of the total building budget which cabinets, lockers, lab equipment, desks, seating and other furnishings are expected to cost. The "total building budget" is about \$4,700,000, for 1800 pupils (maximum), in about 204,900 sq ft.

Because gymnasiums have clerestories on all 4 sides their thin shell roofs appear to float above the large rooms. Boys' gymnasium has a pair of shells in barrel-vault form with a double bowstring truss between. Gym ceilings are acoustic tile applied to the concrete. Swimming pool shell has special moisture-proof acoustic treatment of glass fiber behind perforated panels



ECONOMICS OF WOOD HOUSE FRAMING

By William J. LeMessurier

Assistant Professor of Building Engineering and Construction, M.I.T., and partner in the consulting engineering firm. Goldberg and LeMessurier

MAJOR CONCLUSIONS FROM THE HHFA FRAMING STUDIES: 1. Most economical framing was study and joists, 24 in. o.c., with a flat roof,

1. Most economical framing was studs and joists, 24 in. o.c., with a flat roof, followed closely by trusses, then rafters with joists. 2. Wide spacings for the primary framing, while decreasing its cost, does not necessarily yield a proportional decrease in the total structure — due to higher cost of finish materials. 3. The difference in cost between trussed framing and flat roof joist framing is so small that the final choice need not be based on economy. 4. Of clear span schemes incorporating trusses — trussed bents, three-hinged arches, and pitched roof trusses — only the last proved practical. 5. Among systems departing from conventional methods, post and beam generally gave the most economical designs. 6. The lack of stress grade lumber in 2 by 4's and smaller causes difficulties in the engineering of house structures. 7. A pitched roof can be built without ceiling joists or ridge girders.

Two aspects of HHFA's analysis have quite some significance: (1) the comprehensiveness of the cost data which makes possible accurate comparisons of costs for the wood framing of residences, and (2) the conclusion one must reach, as for the moment, that the principles of framing economy employed in large buildings do not necessarily apply to residences, and some of the structurally efficient designs cannot be built practically with types and sizes of materials now available. Some examples follow:

The stud wall, while it may seem to be an anachronism, is rather practical because of the convenient spacing for finishing materials — and in addition, it can be tipped up from flat on the floor to save construction time.

Economy in larger buildings is often attained with rigid frame members, but one type of rigid frame for a house, spanning 24 ft, 8 ft o.c., and comprised of three 2 by 12's for girders and 4- by 12-in. columns takes 216 bd ft of lumber; a similar structure designed as simple beams on posts takes only 200 bd ft.

Even the popular post and beam system, which harks back to the old mortise and tenon framing cannot be said to be structurally efficient as used today, but it gives flexible plans at fairly low costs, and has such auxiliary values as ease of installing large glass areas, increase in effective ceiling height and

pleasing appearance of the ceiling.

It's not all dark, however, for efforts to achieve more efficient house framing systems: improved gluing techniques for site fabrication may furnish cheaper trusses; factory production of stressed skin panels may bring their cost down; honeycomb-core panels may work as load bearing walls; more accurate and fuller data on floor and roof loads will make possible more accurate design based on allowable deflection; tests by others have shown that bridging for floor joists is unnecessary most of the time; rafters sheathed with plywood transmit direct stress in rafters to the end walls, eliminating the need for

How Analysis Was Done

In the course of its study the Small Homes Council surveyed the entire field of wood framing, selected 18 systems for detailed analysis, and then proceeded to determine material and labor costs by actually building sample units. The framing systems studied were chosen for their suitability for residential construction, their adaptability to usual methods of assembly and erection, and their representation of a variety of basic structural patterns. Nine of the systems which proved costly or impractical in the initial phases were eliminated before the final comparisons. Since it was essential that all units have equal

structural strength for a valid comparison, the engineering analysis of design loads, materials, and framing methods is a particularly valuable portion of the paper.

All items making up the "shell" of the house were included in the cost comparisons. These items were roof, ceiling, wall, and floor framing; roofing, insulation, and vapor barriers; exterior sheathing; interior and exterior finish materials applied but not decorated; finish floors; and foundation, flashing, and rough grading.

Variables not considered in the comparisons were the cost of interior partitions, doors and windows, interior and exterior trim, plumbing, heating and wiring, and all painting and finishing.

The common denominator of the study was a 1000 sq ft, one-story basementless house. It was assumed without question that a rectangular plan with an unbroken roof line was fundamentally most economical. Circular plans, perhaps theoretically more efficient, were considered impractical to build with available materials. A 24-ft span was used as a basis for all cost data.

Cost data was developed with unusual care. Fully detailed plans were prepared for each structural system using consistent engineering criteria for all designs. Based on these drawings, units of one bay, generally 8 by 24 ft were then constructed to determine labor costs and erection characteristics.

After assembling time data and material quantities, costs for each system were developed based on prevailing wage and material rates in Urbana, Illinois, as of February, 1952. These costs were prorated to apply to a constant base of 100 sq ft of floor area. Although end walls were not actually built for all units, their effect was included in all cost figures. Overhangs of 18 to 24 in. were similarly considered. The cost comparisons do not, it should be noted, include allowance for a general contractor's overhead and profit.

As a subdivision of the cost compari-

A review and interpretation of a report on costs of house structural components, sponsored by the now-terminated Division of Research of the Housing and Home Finance Agency, which was headed by Joseph H. Orendorff. It was conducted at the University of Illinois Small Homes Council under the direction of James T. Lendrum, Director, and is now being published as Housing Research Paper 33, "Material and Labor Analysis, House Framing Systems"

sons, in addition to the major study of primary framing methods, separate evaluations were made of methods of sheathing, wall framing, floor framing, and foundation construction. These comparisons may be summarized as follows:

Roof Sheathing

The important variable in the cost of roof sheathing is the spacing of supports provided by the primary framing. Maximum sheathing economy is provided with supports 24 in. o.c., no advantage being obtained with smaller spacings. The most economical material for this spacing is nominal 1-in. sheathing, applied parallel to the ridge. The cost per thousand square feet is \$245.

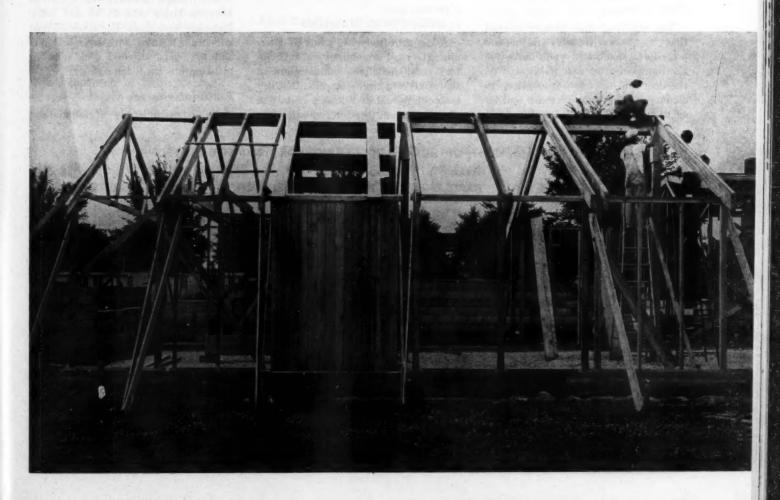
Due to higher material costs, 3/8-in. plywood at this spacing is a little greater at \$266.

When primary supports are spaced at more than 24 in. o.c. up to 8 ft o.c., sheathing costs increase rapidly. Using 2- by 4-in. purlins at 24 in. o.c. between primary frames, costs become \$368 with nominal 1-in. boards and \$390 with 3/8-in. plywood. Nominal 2-in. planking, surfaced four sides, supported at 4 ft o.c. costs \$481, while tongued and grooved planking in the same thickness costs \$544 at spans up to 8 ft o.c. Most costly is \(^4\)-in. plywood spanning 4 ft with blocking 4 ft o.c. at right angles to main supports. This system comes to \$563, or more than twice the cost of sheathing supported at 2 ft o.c.

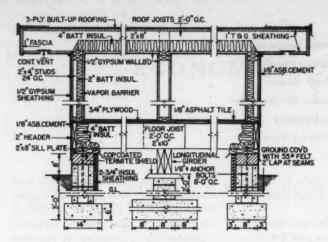
It is obvious that the increase in roof sheathing cost with span will largely offset economies gained by increasing the spacing of the primary supports. This principle is borne out in the data on total costs.

Floor Framing

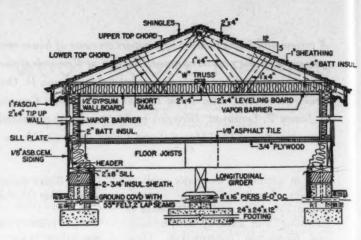
Preliminary investigation of floor framing with the goal of finding the most economical system, including finish flooring, showed that asphalt tile and 3/4-in. plywood subfloor over joists 24 in. o.c. gave best results. With a longitudinal girder supporting floor, bearing partition, and roof, this system cost \$930 for 1000 sq ft. With the girder supporting the floor only, as is the case when trusses are used for roof framing, the



AIH ARCHITECTURAL







2. Trussed rafters and load-bearing stud walls

cost of floor framing is reduced to \$920.

Floor framing costs for post and beam systems showed little difference. The most economical system consisted of beams 8 ft o.c. with purlins 2 ft o.c. and ¾-in. plywood, costing \$930. The similar case with beams 6 ft o.c. cost \$960 while beams 6 ft o.c. used with nominal 2 in. tongued and grooved planking cost \$950.

For all of the floor framing systems, cost of asphalt tile finish floor was \$280.

Wall Framing

The study of wall framing showed that construction assembly and erection procedures significantly affected costs. Conventional stud walls fabricated on the floor and tipped-up into place, including exterior, interior finish and insulation, cost \$720 for flat roof framing.

The effect of gable ends raised this cost to \$790 for rafter and joist framing. Asbestos-cement fiberboard laminated panels also cost \$720 when used with flat roof post and beam framing with posts at 4 ft o.c. and floor slab construction. The most economical wall framing used with post and beam construction consisted of tip-up panels and posts 8 ft o.c. costing \$710 for flat roofs and \$860 for pitched roofs.

Exterior and Interior Finish Materials

A separate study was made to determine the most economical and satisfactory finish materials. Fundamental to this study was the assumption that dry materials would give lowest costs and plaster was not, therefore, considered as

an interior finish. The finishes chosen for use with framing members spaced at 24 in. o.c. are as follows:

Interior: ½ in. by 4 ft by 8 ft gypsum board with taped joints.

Sheathing: ½ in. by 4 ft by 8 ft gypsum sheathing and 1- by 4-in. let-in diagonal braces at corners.

Exterior: ½8 in. by 4 ft by 8 ft asbestoscement sheets with 1- by 2-in, wood battens at nail lines and joints.

Where framing members were spaced at intervals larger than 24 in. o.c., other materials were used. For roofs of post and beam framing with bays 6 ft o.c. and 8 ft o.c., exposed 2-in. nominal planking was the finish ceiling.

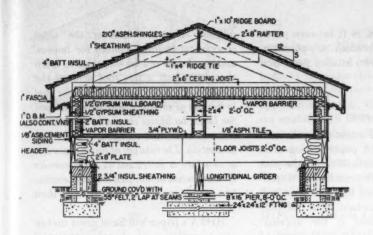
Foundations

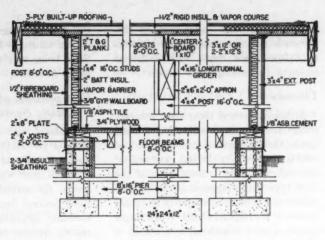
An extensive study of foundations

TABLE 1. COST OF ROOF AND CEILING FOR 1000 SQUARE FEET

FRAMING TYPE	ROOF TYPE	PRIMARY FRAME	SHEATHING, ROOFING AND PURLINS	INSULATION	CEILING	TOTAL	RATIO TO
Joists 2' o.c.	Flat	\$150	\$440	\$100	\$180	. \$870	1.00
Trusses 2' o.c.	Pitched	250	400	100	150	900	1.03
Rafters & Joists 2' o.c.	Pitched	310	400	100	180	990	1.14
Trusses 8' o.c.	Pitched	160	530	100	240	1030	1.18
Trusses 6' o.c.	Pitched	200	540	100	250	1090	1.25
Post & Beam 4' o.c.	Flat	200	920 *		-	1120	1.29
Trusses 4' o.c.	Pitched	230	560	100	240	1130	1.30
Quarter Beams	Flat	120	710	340	_	1170	1.34
Quarter Beams	Pitched	140	680	370	-	1200	1.38
Post & Beam 8' o.c.	Flat	160	710	350	_	1220	1,40
Post & Beam 6' o.c.	Flat	170	710	350	-	1230	1,41
Post & Beam 8' o.c.	Pitched	200	700	370	-	1270	1.46
Post & Beam 6' o.c.	Pitched	200	700	370	-	1270	1.46
Post & Beam 4' o.c.	Pitched	240	700	370	_	1310	1.51

^{*} Asbestos cement fiberboard laminated panels and built-up roof





3. Conventional rafters and load-bearing stud walls

4. Post and beam with non-structural stud walls

was not made as part of this project. While foundations of the grade beam and pier variety may have advantages over the conventional type, they were not studied, because the variables of soil type, presence or absence of frost action, and the relative importance of heat losses were too complex to evaluate. The conventional foundation used with post and beam framing is more expensive than when used with joist framing because of the extra cost of forming piers. For this reason, and because the study at this point had shown joist framing to be most economical, foundations for post and beam framing were not evaluated.

A comparison of slab construction versus crawl space was made for the two most economical types of framing. Floor joists 24 in. o.c. with flat roof and crawl space construction cost \$440 more than slab construction. For pitched roof trusses 24 in. o.c. the difference was \$490. Slab construction is relatively cheaper with trusses than with joists because no footing is required for a center bearing partition.

SYSTEMS ANALYZED FOR COSTS

Flat Roof Joist Construction

As will be seen in Tables 1 and 2, flat roof construction with joists 24 in. o.c. is the most economical type of house framing. This structural scheme is the most traditional of those studied. The essential character of this type is gov-

erned by the central bearing partition used to support the joists. In general the construction is standard with stud walls, 1-in. roof sheathing, batt insulation, and 3-ply built-up roof. Wall materials are as indicated before.

Rafters and Ceiling Joists

This system is also traditional and is similar to the corresponding flat roof construction in requiring the use of an interior bearing partition to carry the ceiling joists. All primary framing members are 24 in. o.c. and the roof is shingled with asphalt shingles. Other materials are, in general, identical with those used for flat roof construction.

It should be noted that the combination of rafters and ceiling joists is essentially a form of truss framing. The de-

TABLE 2. COST OF ROOF, CEILING, WALLS AND FINISH FOR 1000 SQUARE FEET

FRAMING TYPE	ROOF TYPE	ROOF AND CEILING	WALLS* AND FINISH	TOTAL	RATIO TO LOV
Joists 2' o.c.	Flat	\$870	\$720	\$1590	• 1.00
Trusses 2' o.c.	Pitched	900	760	1660	1.04
Rafters & Joists 2' o.c.	Pitched	990	790	1780	1.12
Trusses 8' o.c.	Pitched	1030	760	1790	1.13
Post & Beam 4' o.c.	Flat	1110	720 ¹	1830	1.15
Trusses 6' o.c.	Pitched	1090	760	1850	1.16
Trusses 4' o.c.	Pitched	1130	760	1890	1.19
Post & Beam 8' o.c.	Flat	1220	7103	1930	1.21
Post & Beam 6' o.c.	Flat	1230	750 ³	1980	1.25
Quarter Beams	Flat	1170	960	2130	1.34
Post & Beam 8' o.c.	Pitched	1270	860 ³	2130	1.34
Post & Beam 4' o.c.	Pitched	1310	840 1	2150	1.35
Post & Beam 6' o.c.	Pitched	1270	910 2	2180	1.37
Quarter Beams	Pitched	1200	1120 2	2320	1.46

^{*} All walls 2x4" studs, 24" o.c., covered by sheathing, asbestos cement exterior finish, gypsum dry wall interior finish, except as noted below

^{33&}quot; T&G with 1x2" strapping and reflective insulation

sign was carefully engineered on this principle and the connections of joists to rafters were made with sufficient strength to develop truss action.

Trusses

Although several clear span schemes using trusses were studied - trussed bents, three-hinged arches, and pitched roof trusses - only the last type proved economical. These trusses were of the Fink type with diagonals at the quarter points of the top chord and at the third points of the bottom chord. While larger spacings were considered as a means of economy in the trusses, the great savings in sheathing and finishing materials made a spacing of 24 in. o.c. clearly the most efficient. Since the trusses do not require the use of an interior bearing partition, this system is the most economical when planning requires a clear span of 24 ft or more. Furthermore, considering the total shell cost of slab construction, trussed framing at the 24-ft span is \$2920 while flat roof joist framing is \$2900. This insignificant difference means that the final choice between flat and pitched roofs need not be based on economic considerations.

Post and Beam Construction

Among those structural schemes which depart from conventional methods, the post and beam system generally gave the most economical designs. Two types of post and beam framing were studied: the first ("post and beam" in tables), having beams parallel to the 24-ft dimension of the house and an interior girder paralleling the long walls, is the more common variety; the second, called quarter-beam framing, used beams supported by interior posts with the beams 6 ft o.c. and running parallel to the long walls. In both cases, nominal 2-in. sheathing was used between beams, with the single exception that asbestos cement fiberboard laminates were used with posts and beams 4 ft o.c.

The quarter beam system gave the most efficient primary frame of any system studied, but complexities of wall framing made the total costs of this scheme higher than the other post and beam arrangements. With beams parallel to the 24 ft span, maximum economy was achieved by using 4 ft o.c. spacing and asbestos cement fiberboard laminate panels. Slightly more expensive (\$100 in the total of roof and wall costs) was the case with beams at 8 ft o.c. and 2-in. plank. In both of these systems the cen-

tral girder spanned 16 ft between posts, giving unusual freedom to planning, there being only two interior posts in a house 40-ft long.

Comparison of Framing Systems

Tables 1 and 2 summarize the cost data of the HHFA paper, giving total costs of roof construction and the cost of roofs and walls combined, respectively. Examination of these data will show several important facts. Of outstanding importance is the approximately inverse relation of the cost of the primary framing to the cost of sheathing and finishing. It can be easily shown that the cost of primary frames decreases as spacings increase. All members become more heavily loaded and consequently work more efficiently. This is a well-known principle. Sheathing and finishing materials, however, become more and more expensive as their span increases, and this rise in cost more than offsets savings in the primary frame. For these reasons, it can be seen that the three systems - joists, rafters, trusses - with primary structural element spaced at 24 in. o.c. give the least total superstructure cost.

When spacings are increased above 24 in. o.c. the economy relations change abruptly. Since nominal 2-in. planking or 2 by 4-in. purlins can span 8 ft, 8 ft o.c. spacings of primary supports lead to lower costs than spacings of 6 ft or 4 ft for the same sheathing system. The economy here is realized in savings in the primary structure. (The exception to this rule of flat-roofed post and beam with 4-ft o.c. spacings is explained by the special asbestos-cement panels used for sheathing, insulation, and finish ceiling.)

In view of the current interest in post and beam framing, it is interesting to note the higher cost of this system when compared to a flat roof built of joists 24 in. o.c. The combined cost of walls and roof, post and beam, with 8 ft o.c. bays and 2-in. planking, is 21 per cent higher than joisted construction. A large part of this difference (\$250 out of a total difference of \$340) is accounted for by the cost of 11/2-in. rigid insulation compared to 4-in. batts. The \$90 remaining in the cost difference between these two types represents the higher cost of 2-in. planking, compared with 1-in. sheathing and a separate ceiling of ½-in. gypsum board.

The Small Homes Council has made a

diligent effort to discover the most economical framing system for houses, and we should not be surprised to learn that joists and a flat roof achieve the lowest cost. This fact demonstrates that principles of structural economy developed for larger buildings cannot be extended to house construction without careful examination. The relation of finish materials to structure is so critical in the economics of house construction that any cost evaluation which neglects consideration of them is valueless.

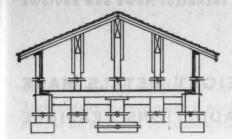
HHFA's paper will be of great usefulness to architects in choosing structural schemes, even though their choices may not be the most economical. It is important to know the premium paid for a slightly more expensive system. A cost differential of 34 cents per sq ft may be a small price to pay to gain the architectural values of post and beam framing, which may be lacking in joisted construction.

Limitations of the Study

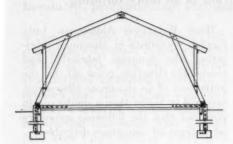
Any comparison of costs on a product as complicated as a house must, by necessity, be limited in terms of variables considered. The Small Homes Council and HHFA are to be praised, therefore, for the breadth and scope of their study. Certainly, no other investigation of this kind has examined so many different structural schemes with such thoroughness. There are, however, several restrictions which must be placed on the results.

First, and perhaps most important, it must be understood that the cost data given by HHFA are based on methods for building single houses one at a time. It is certain that the volume builder can cut material costs through quantity purchases, and in some cases can reduce the labor costs through production line assembly. An obvious place for the latter type of savings would be in the fabrication of roof trusses.

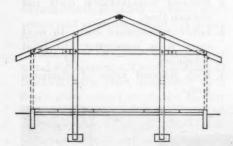
Another aspect of the study, which must be noted, is the wide variation in the adaptability of the structural schemes to different architectural plans. The least expensive, joists at 24 in. o.c., is also the least adaptable, since an essential part of the scheme is the use of an interior bearing partition. (Furthermore, HHFA, in its cost data, does not include the cost of this partition. While this may be justified, an objection may be raised to the inclusion of the cost of interior supports in totals in the case of post and



Plank and quarter beams



Three-hinged arch



Trussed bents, curtain walls

The 18 systems selected for analysis were: 1, 2. conventional stud wall, pitched and flat roofs; 3, 4, 5. trusses 2 to 8 ft o.c.; 6, 7, 8. post and beam 4 to 8 ft o.c.; 9. plank and quarter beams; 10. rigid frames, 8 ft o.c.; 11. stressed skin panels; 12. walls comprised of spandrel and lintel girders; 13. honeycomb-core panels; 14. semi-rigid trussed bents, 8 ft o.c.; 15. trussed bents, 8 ft o.c., columns at quarter points; 16. threehinged arch; 17. walls of trussed frames; 18. rigid posts 8 ft o.c. with lateral girts

beam framing. In the case of posts and beams at 8 ft o.c., the use of interior posts at the same spacing as the beams would reduce the cost of this system by approximately \$60, whereas ridge girders spanning 16 ft were actually used.) Since a rectangular plan was assumed in all cases, departure from this will change relative cost data. Joists and rafters are, for example, more adaptable to irregular plans than trussed framing.

Other Schemes Considered

Among other schemes studied, several merit discussion here. Because of its applications in prefabricated construction, the stressed-skin panel system is of special interest. The Small Homes Council made a special investigation of the cost of 4- by 8-ft panels to be used as roof members or wall panels spanning between primary supports, 8 ft o.c. The panels were built of 1- by 3-in. ribs, 12 in. o.c., and 1/4-in. plywood faces, and the total cost for these materials was 42 cents per square foot. For comparison, it was found that a nailed panel, having no stressed-skin action, could be built of 1- by 4-in. ribs, 16 in. o.c., faced with ½-in. fiberboard sheathing and %-in. gypsum drywall and taping, for 24 cents per square foot, material cost. As HHFA points out, the relatively high cost of plywood to other materials casts doubts on the economy of plywood stressed-skin panels in the sizes studied. No study was made of panels serving as primary structure for spans longer than 8 ft, and it is probable that only in this range do stressed-skin panels become truly efficient cost wise.

Two framing systems were investigated which are rigid bents, capable of independently carrying both vertical and lateral loads. The trussed bent system, suggested by architect Rene de Blonay of New Haven, Connecticut, uses pitched top chord trusses, supported at the 1/4 and 3/4 points of their span by interior posts. Using these frames at 8 ft o.c., it was found that they were a very costly primary structure. (\$370 for the trussed bents versus \$160 for regular roof trusses at the same spacing.) Although material costs were also high, the major difficulty with this scheme was erecting the bents.

The second rigid system, three-hinged arches spaced at 8 ft o.c., cost \$310 for the primary frame. Of this total cost, \$200 was for material and \$110 for labor. This scheme was also much less efficient

than ordinary roof trusses, and had the further defect of awkwardly cutting into the interior space.

Structural Factors Considered

In any comparative study of building costs it is essential, for realistic comparisons, that all systems studied have approximately equal resistance to loads. It was necessary, therefore, for the Small Homes Council to undertake a study of structural factors and methods as part of their work. Of prime importance was the choice of live loads. Based on examination of a variety of building codes, floor loads were taken as 40 psf and snow loads on both flat and pitched roofs were 20 psf on the horizontal projection. For wind loads, the recommendations of the Building Code Requirements for New Dwelling Construction -BMS 107, United States Department of Commerce, were followed. In general, maximum forces of 18 psf normal to walls, and 23 psf outward force normal to flat and pitched roofs were used.

Investigation of strength properties of building materials discovered many deficiencies in available information. The lack of stress graded lumber to meet the structural needs of house construction was a particular difficulty. Specified material for this study was the 1100 psi stress grade. In Southern Pine, 1100 psi grade is limited to 2-in. thickness. No Douglas Fir (C.R.) lumber graded for bending stresses is available in the 2 by 4 and smaller sizes (1100 psi grade applies to members 2 to 4 in. thick and 6 in. and wider).

In its study of pitched roofs, the Small Homes Council reviewed ordinary practice in the light of engineering principles, and concluded that it is possible to build a satisfactory pitched roof without ceiling joists or ridge girders. A design was made for a house 24 by 40 ft using rafters sheathed with 3/8-in. plywood, nailed on 4-in. centers with 8d nails on all edges. Calculations showed that this combination of rafters and sheathing was sufficiently strong to transmit all outward thrusts to end walls, thus creating a clear span framing system requiring supports only at the perimeter of the house. Such construction offers especially good resistance to wind loads. Unfortunately, this framing technique was not evaluated in the cost analyses, but it seems possible that it might have advantages as a particularly economical clear span framing method.

LIGHTWEIGHT METALS MAKE

"SUPERSTRUCTURE" ADDITIONS FEASIBLE

Welded aluminum alloy structural members frame a second-story addition to an office building

An all-welded aluminum alloy structural frame rests on the 26-ft-wide by 75-ft-long flat roof of the single-story Ferodo Company office building in Chapel-en-Frith, England.

Lightness and ease of handling large prefabricated sections were the main advantages of the aluminum construction, said H. C. Husband, consulting engineer. In spite of adverse weather conditions, a team of four men, including a foreman, erected the whole structure in 382 man-hours. The heaviest element used in the frame weighed only 224 lb.

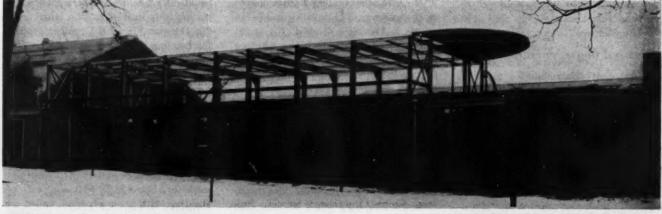
The welded rigid frame structure was designed to eliminate any bending moment on the walls of the existing building due to the fixing of the column bases. A two-pinned frame design was

adopted for the main supports, with a special welded knee-joint detail (shown below right). An interesting base plate design, as pictured at left below, is curved to form a rocker which takes much of the load. The legs of the frame are welded to the base plate. The welded frame structure was practical also in this case, since the depth of the rafter had to be kept to a minimum anyway.

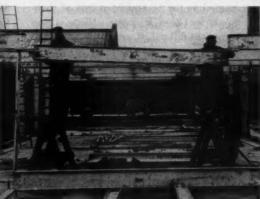
Flat aluminum alloy sheets cover the roof, and a false ceiling of flat asbestos sheets is suspended from the underside of the plate girders. A semicircular canopy cantilevered from the front of the framework consists of five aluminum alloy plate girders extending radially from the main structure and supported at the center by thin steel columns.

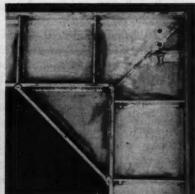
Head Wrightson Aluminium Ltd., English specialists in aluminum fabrication who designed, fabricated and erected the structure, point out that the initial cost of an aluminum alloy structure will be higher than a similar one in steel but that the following secondary advantages are sometimes desirable:

- 1. Saving on foundations to support the lightweight structure.
- Reduced cost of machinery for moving elements.
- Reduced transportation costs and erection time.
- Lower maintenance costs. In most cases it is unnecessary to paint aluminum.
- 5. High disposal value of aluminum scrap.









Many overcrowded buildings can expand in only one direction — upwards. Lightweight metals make it possible by minimizing the dead weight on the existing foundations. Here are two recent examples

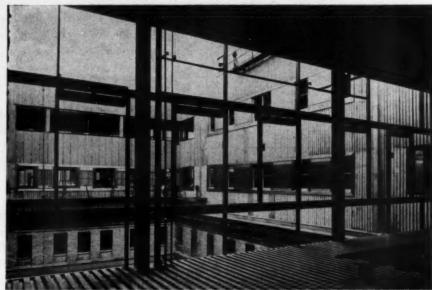
Insulated, prefabricated, stainless steel curtain wall panels enclose a city hospital addition

A sandwich-type, prefabricated, firecode-approved curtain wall was erected on top of New York City's Bellevue Hospital after engineering investigations revealed that the structure could not support a masonry addition. Masonry construction that would have satisfied New York City's fire code would have weighed 140 psf, and the heavy structural steel needed to support this dead weight would have further burdened the old foundation. Consequently the architects, Fellheimer and Wagner, recommended insulated stainless steel panels that weigh only 14 psf and satisfy fire codes.

Each panel consists of a sandwich of metal and insulation. Twenty-gauge 2-D finish stainless steel, cold-rolled to a fluted cross section, is on the weather side, and a galvanized sheet of steel on the other. Two layers of 10-lb mineral wool, one layer of unsaturated asbestos felt and two sheets of gypsum board make up the filling, as shown in the photograph at the right.

The panels are shaped to fit on top of each other with an overlap of about 2 in. The bottom panel is die-formed with a slight inset, so that a smooth exterior is formed. The interior sheets of the panels butt against each other, making good walls that require only a decorative coating. No auxiliary installation or additional fireproofing is required. The thin, heat-resistant panels provide 2-hr fire protection, and their insulation value is superior to 12 in. of brick.

The penthouse addition was made by tying into the existing columns and erecting a light structural framework above what was once the roof, leaving a crawl space under the new eighth floor. Another weight-saving feature is the light-gauge, cold-formed floors, which have great strength with little bulk. The floor panels are fluted, so that wiring installation is simplified and future electrical obsolescence is prevented.



The prefabricated panels, of standard 2-ft widths and varying lengths, were identified for position before erection. They were hoisted into place, bolted at two points on the upper end and then welded to the structural steel with short beads on 1-ft centers, the entire operation for one panel being a matter of minutes. The stainless steel trim, coping. soffits, fascia, flashing and window panels were also completely fabricated and marked for position before delivery to the job site.

Although the texture of the panels harmonizes with the brick, sections of brickwork were carried up into some lower areas of the penthouse to avoid too severe a horizontal line.

Quicker completion of the construction and lower erection costs kept the job within the specified \$21/4 million budget. The panels were fabricated and erected by the H. H. Robertson Co., which claimed that they had, in addition to high fire resistance and strengthto-weight ratio, high durability, weathertightness and freedom from maintenance.

(Roundup continued on page 240)





TIMBER TRUSSES

• The following new catalogs are available from *Timber Engineering Co.*, 1319 18th St., N.W., Washington 6, D. C.:

The 1955 edition of *Teco Products and Service Catalog* contains a roster of timber fabricators equipped to supply fabricated lumber ready for assembly into roof trusses.

Typical Designs of Timber Structures, in a new edition, includes 102 typical designs that illustrate suggested methods of Teco timber connector wood framing for commonly encountered structural problems in timber roof trusses, bridges, towers, hangers, bleachers and farm buildings.

Copies of five new typical designs (Nos. 629 to 633) of segmental bowstring timber trusses, for spans of 60 to 100 ft, are available. Design No. 636 is a new segmental bowstring timber rafter for spans of 34 to 50 ft with 4-ft spacing.

Clear Span Wood Roof Trusses has been prepared as a guide for the selection of the proper and most economical roof truss design for particular building projects.

STAIR TREADS

• Tri-Lok grating and stair treads are explained in a 16-page brochure containing illustrations of applications and installation and a series of tables listing the grating weights, sizes and safe bearing loads. Dravo Corp., 1203 Dravo Bldg., Pittsburgh 22, Pa.*

STAGE LIGHTING EQUIPMENT

• Stage lighting information and equipment is presented in three new bulletins from Century Lighting, Inc., 521 West 43rd St., New York 36, N. Y.:*

The C-I Board describes the first allelectronic system — the Century-Izenour system — for stage lighting control. 10 pp, illus.

Catalog 4 covers television lighting equipment. 24 pp, illus.

Stage Lighting Facilities for the School and Community Theater includes lists of equipment and recommended quantities for each type of theater. 8 pp, illus.

• Lighting Control Switchboards for schools, universities, theaters, TV studios, and auditoriums are cataloged in a 21-page illustrated bulletin, with circuit diagrams. General Electric Co., Distribution Assemblies Dept., Plainville, Conn.*

AIR CLEANERS, CONDITIONERS

• Electronic air cleaners for homes are described in an 8-page brochure, which includes section drawings and specifications. Electro-Air Cleaner Co., 1285 Reedsdale St., Pittsburgh 33, Pa.

METAL BULLETIN

• Architectural Metal Bulletin No. 20 gives illustrations and detail drawings of the Philadelphia International Air Terminal. Nat'l Assoc. of Architectural Metal Mfrs., 228 N. Lasalle St., Chicago, Ill.

MOISTURE PROTECTION

• Protect New Home Construction from Destructive Moisture explains the cause and effect of destructive moisture and includes illustrations and a description of Sealtight premolded membrane vapor seal. W. R. Meadows, Inc., Elgin, Ill.*

*Other product information in Sweet's Architectural File, 1955.

FIRE PROTECTION

- Information on metal lath membrane fireproofing for steel structures is available in the revised edition of Technical Bulletin No. 3. Specifications and descriptions of metal lath membrane fireproofings as well as details and fire resistive ratings for columns, beams, girders, trusses and floor and roof deck assemblies are included. 22 pp. Metal Lath Mfrs. Assoc., Engineers Bldg., Cleveland, Ohio.*
- Firesafe Churches gives details of church construction and remodeling jobs using vermiculite plaster aggregate, insulating concrete, insulating fill, acoustical plastic and precast concrete roof tile. Zonolite Co., 135 S. Lasalle St., Chicago 3, Ill.*
- A folder containing literature giving data and information on the design and fire resistance of machine-applied vermiculite concrete walls can be obtained from the Vermiculite Institute, 208 S. Lasalle St., Chicago 4, Ill.

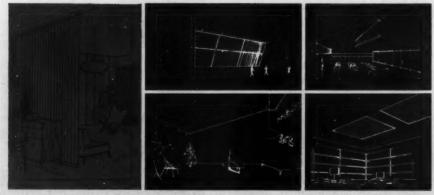
PORCELAIN PANELS

• A 12-page, illustrated catalog covers the subject of porcelain enamel panels and includes architect's details and methods of application. Davidson Enamel Products, Inc., 1109 E. Kibby St., Lima, Ohio.*

DICTAPHONES

• Telecord dictation systems, basic installation, manual, and automatic selection and dictaphone service are covered in a 12-page illustrated brochure from Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y.*

(Continued on page 288)



Details, specifications and illustrations of the applications of *Lowerdrape* vertical blinds are included in a 4-page folder available from the Vertical Blinds Corp. of America, 1936 Pontius Ave., West Los Angeles, Calif.

Materials | Equipment | Furnishings | Services

HOME FURNISHINGS PRODUCTS CITED. Eleven products from a field of over 300 entries in the National Home Fashions League's fifth annual competition have won Trail Blazer Awards for representing "a genuine departure in the design and styling of contemporary home furnishings, and a significant contribution toward the advancement of the industry as a whole." Professor James Marsten Fitch, of the School of Architecture at Columbia University, who served on the awards jury, explained the significance of the winners at award ceremonies. Each of the winners, some of which are shown below, is mass-produced in the United States and was introduced between June 1, 1954 and Feb. 15, 1955.

Wall refrigerator-freezer combination, cited as best in "Major Equipment" and also winner of an honorable mention in the 58th Annual Gold Medal Exhibition of the Architectural League of New York, hangs on the wall and looks like a kitchen cabinet. Available in the G-E "Mix-or-Match" five colors and white, the unit has an 8.7-cu ft refrigerator section and a 2-cu ft freezer compartment. Doors open by means of finger grips at the base, so there are no protruding handles, and they are sealed closed by a magnetic device. Panels along the bottoms of the doors are replaceable so that they can match the design and material of the counter top. General Electric Co., Major Appliance Div., Appliance Park, Louisville 1, Ky.



Plastic pull-out drawers, molded of Bakelite phenolic plastic, took top honors in the "Furniture" class. The units, made in one piece with molded-in runners and center guide flanges, have rounded corners for easy cleaning and molded-in color. Resistant to swelling and warping, the drawers can be used as decorative pieces in furniture or as storage units. Boonton Molding Co., Boonton 1. N. J.





I REDTTERTEDAL

Color-flecked steel kitchen cabinets, winner in the "Finishes - Hard Surface" class, are available in six colorflecked shades to color-match cabinets to kitchen appliances. A special paint with a heavy colloidal suspension dries slowly and results in a multi-color effect. Should chipping occur, the finish can be touched up with no area color differences. The Capitol Roto-Base Corner Cabinet in color-flecked finish is shown at left. Capitol Kitchens, Roselle,

Sylmer finish for upholstery fabrics, top entry in the "Finishes and Finishing Materials - Soft" class, is a siliconebase finish which forms a thin, resilient, invisible envelope around each fiber of the material. It provides resistance to liquids, which form beadlike shapes for sponging, permits easy removal of oil and grease stains and increases resistance to wear and wrinkling. Dow Corning Corp., Midland, Mich.

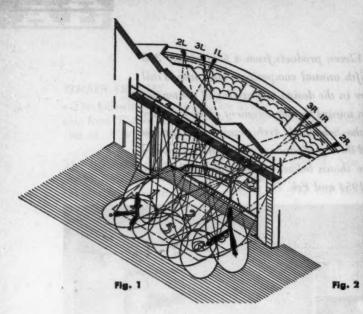


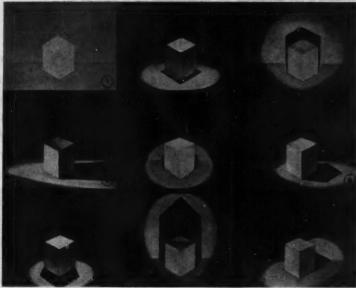
"Counterpoint," a 100 per cent wool, tufted carpet, won in the "Floor Coverings - Soft" class. The first to be placed on the market, the Gulistan carpet has a rough, tweedy appearance and is available in nine colors. A. $\oint M$. Karagheusian, Inc., 295 Fifth Ave., New York 16, N. Y.



Patterned resilient floor tile, "Geometile" was declared best in the "Floor Coverings - Hard Surface" class. The pre-cut vinyl tiles are made in a series of modular geometric units in a variety of slim diamond, regular diamond, hexagonal and octagonal shapes and come in bold and solid shades, marbleized and terrazzo patterns. Robbins Floor Products, Inc., 535 Fifth Ave., New York, N. Y. (More products on page 244)







Illustrations from, "A Method of Lighting the Stage "by the author published by Theater Arts, Books

LIGHTING THE SMALL SCHOOL STAGE

By Stanley McCandless

Professor of Lighting, Yale University
Research and Development, Century Lighting, Inc.

LIGHTING techniques for the school stage have changed as radically as the structural methods and design concepts of the school as a whole. Yet, lighting layouts for these stages often are based on outmoded practices of twenty-five years ago, with the result that obsolete equipment is bought and thus stage uses are extremely limited.

There are perhaps several reasons for this: First the idea still persists that footlights and borderlights are the basic essentials, whereas they are only of secondary importance (sometimes they are not used at all). Second, a guide is needed for the design of the school stage along professional lines at a cost that will match the budget available.

The purpose of this article and the Time-Saver Standards on pp. 233 and 235 is to explain briefly the functions of stage lighting equipment and to present a typical up-to-date layout, with the minimum equipment required even if only one play a year is to be presented. The extensiveness of the lighting layout will depend on just how much the stage is to be used as a teaching medium for dramatics and for school programs, and whether it is to be used as a community theater.

The fundamental uses of light on the stage are so simple, and so obvious from every-day experience, that even the beginner can produce results if he has a strong dramatic and experimental urge. A dramatic sense comes with an understanding of the functions of light on the stage.

Obviously, it is necessary to provide "visibility," and some ways are better than others for achieving it. Light must be directed to the areas of most importance (the actor's face usually) and kept off those of least importance (the scenery, usually). It is not true that a flood of general light from borderlights or footlights gives the best results. On the contrary, directional spotlighting from the front is much better because it localizes light where it is intended, and does not make the actor compete with the scenery for attention.

The figures above demonstrate how spotlights cover a stage, and how an object looks lighted from various directions.

Fig. 1: actor is lighted from both sides in six "acting areas." Pools of light merge to give even appearance.

Fig. 2: effect of different directions and distributions of light. (1) general distribution from all directions practically eliminates form; (2) downlight directly above gives little illumination on vertical faces; (3) center-front light as from balcony; (4) light as from side of stage—sharp contrast between vertical faces; (5) center-front at 45 deg, less shadow than (3) gives; (6) side lighting at 45 deg, good on top and one vertical face;

(7) back lighting, good light on top and separation from background; (8) front lighting as from below, exaggerated shadow; (9) diagonal lighting, desirable balance of highlight and shadow.

Light can be made to simulate different times of day — to give the effect of sunlight and moonlight. In fact there is a danger that this "naturalism" can so intrigue the beginner, and sometimes the expert, that it tends to "steal the show."

The professional designer in the theatre spends considerable time balancing the lighting of each scene. With a wide selection of colors, and each source on a dimmer, he is able to modulate the intensities and colors from various directions so that a carefully composed picture results. The whole visual effect must be appropriate to the type of play, and, strange as it may seem, many small dimmers are included in the layout, not for changing light during the performance as much as to provide a proper static balance.

The last function of light on the stage, and probably its most important one, is creation of mood or atmosphere. For example we know that bright light is consistent with comedy, dim with tragedy; warm with comedy, cool with tragedy. Thus visibility, naturalism and composition comprise the interrelated objectives of stage lighting.

Another

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Consulting Architects: Samuel Hannaford & Sons General Contractor: Harmon Construction Company Equipped with Adlake Series 1000 Reversible Window

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- → No painting or maintenance
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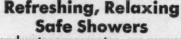
They protect bathers from scalding and "shots" of hot or cold water, caused by-





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LIGHTING THE SMALL SCHOOL STAGE: 1

By Stanley McCandless

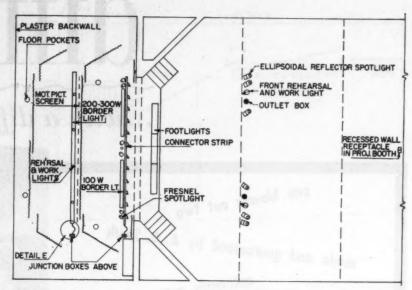
Professor of Lighting, Yale University
Research and Development, Century Lighting, Inc.

These pages show a suggested layout and equipment for a small stage. Anything less should be considered a speaking platform and be treated as such. Equipment listed in the tables is a conservative minimum. A discussion of the lighting equipment and some special portable units follows:

Spotlights: generally there should be acting area lights directed so that the actor is lighted from the front diagonals with a warm and a cool color. Ellipsoidal spotlights are used in front of the proscenium because they will not spill light on the audience; fresnel lens spots behind the proscenium blend the lighting of adjacent areas easily.

Border and Background Lights: There should be a borderlight behind each masking border to light the next cloth border or back curtain. Background lights are for lighting the back-drop or cyclorama (plastered back wall in this case), window backings, ground rows, and all parts of the scene visible to the audience but outside the acting area. These instruments are used primarily for exterior scenes. The back-drop or plastered back wall calls for considerable wattage. Strips placed close to the base at the foot of the back-drop can give effects of sunset, etc.

Special Lights: (1) instruments used for emphasizing doorways and special pieces of furniture (generally spotlights); (2) high-powered units to (Continued on page 235)



Lighting Layout

Switchboard Diagram

		- 1	WORKLIGHT			
G PANEL	PILOT LT. DIMMER 9 9 9 9 9 10 AMP. SWITCH 9 9 11 9 9	SO AMP. LSW.	20 AMP SWITCHES SWITCHES FOR WORK LTS. MASTER SW O D D O PUSH BUTTON FOR EMER. LTS.	•	φ	
INTERPLUGGING			SO AMP SW HOUSE LIGHTS 6 KW O		φ	

LIGHTS

UNIT	FUNCTION	QUANTITY
6-in. Ellipsoidal Reflector Spotlight, 250-750-w	Lighting front acting areas	6
Disappearing Footlight, 100-w, nine lamps	Toning of faces and	3
6-in. Fresnel Spotlight, 250-750-w	Lighting rear acting areas	6
Borderlight, 100-w, 8-ft long, 16 lamps, four colors, one work light	Blending of acting areas	2
Borderlight, 200–300-w, 25 ft, 4 in., 36 lamps, three colors, four work lamps	Lighting background	1
Front Rehearsal and Work Lights, 500-w, R-40 lamps, adjustable sockets	As indicated by name	2

OUTLETS

UNIT	QUANTITY
Connector Strip, 24-ft long	1
Surface Mounted Outlet Box	2
Floor Pockets, 4-way	4
Recessed Wall Mounted Receptacle, 2-way, 50 amp	1

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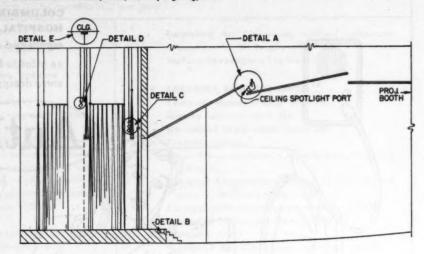
LIGHTING THE SMALL SCHOOL STAGE: 2

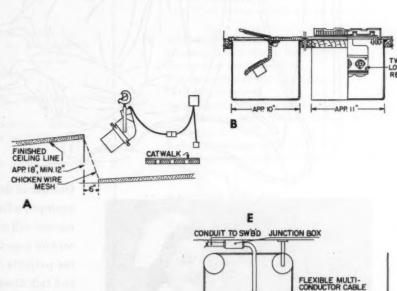
By Stanley McCandless

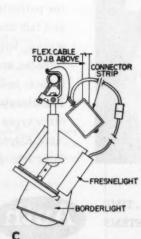
simulate sunlight and moonlight (3) "effect machine" to project patterns or Linnebach Lantern for shadow patterns; (4) a 2000-w ellipsoidal reflector follow spot for musicals, which should be mounted on a stand not over 75 ft away from the stage. As a measure of safety and reliability, all portable connections should be made by 20-amp twistlocks.

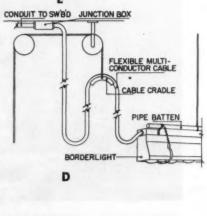
Dimmers: lighting equipment is useless without a certain number of dimmers to permit (1) color mixing and intensity balancing, (2) individual or group dimming or brightening at some course of action in the play. In theory each circuit should be dimmed separately, but cost will probably necessitate a compromise. A practical way for grouping several circuits is through use of an interplugging panel. With this panel any one or group of load circuits can be connected to any dimmer control. Auto-transformer type dimmers are used because they will dim any load proportionally up to their rated capacity; this is not true of resistance dimmers. Note on the drawing of the switchboard that house light dimmers are separate. Large dimmers can serve as proportional masters over the six smaller dimmers, or be used as individual large dimmers for controlling background lighting. In the patch panel, the 1000-w dimmer controls have two jack pockets and the 6000-w units have four jack pockets. Each load circuit representing outlets placed about the stage is protected by a circuit breaker, and the whole panel has a locked door to prevent tampering with the setup. As far as possible, switchboards should be placed so that the operator can see the stage.

Professor of Lighting, Yale University
Research and Development, Century Lighting, Inc.







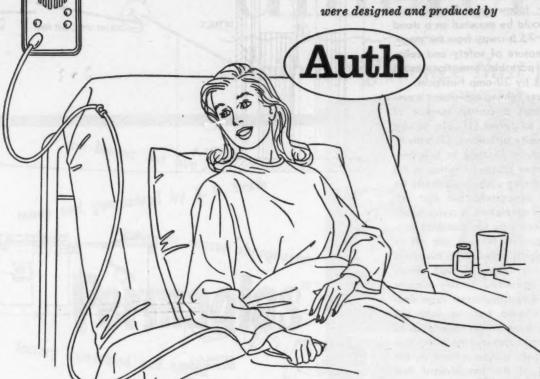


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TIME SAVER STANDARDS

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signal and communication systems so vital to hospital efficiency were designed and produced by





One nurse does the work of two in hospitals equipped with the new Auth VOKALCALL audio-visual nurses' call system. The nurse uses her VOKALCALL control board for two-way voice communication with the patients in her care. She can learn their needs and talk directly to them without leaving her station. VOKALCALL doubles the nurse's effectiveness, and saves her countless unnecessary trips to bedsides each day.

For literature that describes this and other types of Auth systems, write to:

Auth Electric Company, Inc.

Long Island City 1, New York

SIGNAL, TIME and COMMUNICATION SYSTEMS





NORTH AMERICAN BUILDING STONES-16

Presented through the cooperation of the International Cut Stone Contractors' and Quarrymen's Association

INDEX OF BUILDING STONES—(To be continued in a later issue)

65 WINONA TRAVERTINE STONE

Company Name: Biesanz Stone Co., Inc.

Quarry Location: Winona, Minn.

Geological Designation: Dolomitic Limestone

Texture: Travertine

Color: Yellow, white, buff, pink and gray

Chemical Composition: Large magnesium content

(not tested by this company)

Physical Tests: Specific gravity—2.53%; abrasive hardness—13.9%; absorption of moisture by weight—2.8%; percentage of porosity by volume—9.8%

Strength: Compressive strength, against grain— 17,000 psi, with grain—8900 psi; tensile strength, against grain—960 psi, with grain—550 psi

Weight: 158 pcf

Furnished As: Dimensional, Ledgestone, Splitface. Brick heights for 2%'' coursing. Lengths to 8'

Surface Coverage: 40 sq ft per ton

66 "YASU"

Company Name: Nevada Flagstone Quarries, Inc.

Quarry Location: Goodsprings, Nev. (Mail address: 2840 Fremont, Las Vegas, Nev.)

Geological Designation: Sandstone

Texture: Medium

Color: White, yellows, gold, pink, purple, red and

Furnished As: Dimensional, Splitface. Splitface: Heights — 1"-10". Lengths — 8"-48". Dimensional: Heights — 1"-2½"

Surface Coverage: Dimensional (strataface) — 120 sq ft per ton. Splitface — 40-50 sq ft per ton

ADDENDA

67 ALLEGHENY (reg. U. S. Pat. Off.)

Company Name: Allegheny Natural Stone Co.

Quarry Location: Jersey Shore, Pa. (Mail address:

Geological Designation: Quartzite

Texture: Fine-grained

Color: Allegheny Bluestone—Variegated shades of

green, red, blue, lilac, gun metal

Furnished As: 1" rock-faced veneer. Each stone bonded with adhesive, interlocked with special clip and mechanically tied with screw, completely processed, ready for application

Surface Coverage: 235 sq ft per ton 1" veneer

68 ARKANSAS CHERRY BLEND STONE

Company Name: Arkansas Cherry Blend Stone Co.

Quarry Location: Paris, Ark.

Geological Designation: Sandstone

Texture: Medium

Color: Brown, gray, cream, buff, pink, pink variations

Furnished As: Dimensional, Splitface, Ledgestone. Heights — 1"-5". Lengths — 12"-48" Surface Coverage: 45 sq ft per ton

69 ARKANSAS RAINBOW LEDGE

Company Name: Rainbow Stone Co.

Quarry Location: Paris, Ark.

Geological Designation: Sandstone

Texture: Medium

Color: Brown, tan, yellow, pink, white gray, variegated with swirls

Chemical Composition: Silica — 95.2%; aluminum oxide — 2.5%; iron oxide — 0.6%

Physical Tests: Absorption of moisture — 1.33%

Strength: Crushing strength — 13,400 psi

Weight: 159 pcf

Furnished As: Dimensional, Ledgestone. Heights — 1"-6"; 1"-4". Lengths — 12"-48"

Surface Coverage: 1"-6" coverage — 40 sq ft per ton. 1"-4" coverage — 50 sq ft per ton

70 CLEARCREEK CUT-FACE

Company Name: Missouri Native Stone Co.

Quarry Location: Dederick, Mo.

Geological Designation: Sandstone

Texture: Fine-grained

Color: Mixtures of buff, gold and brown

Furnished As: Ashlar Veneer. Heights — 34"-81/2". Lengths — 10"-30"

Surface Coverage: 50-60 sq ft per ton

Other Facts: Each piece has outline of sawmark top

71 CLEARCREEK SNAP-FACE

Company Name: Missouri Native Stone Co.

Quarry Location: Dederick, Mo.

Geological Designation: Sandstone

Texture: Fine-grained

Color: Mixtures of buff, gold and brown

Furnished As: Splitface, Ledgestone. Heights —1"-6". Lengths — 10"-30"

Surface Coverage: 45-50 sq ft per ton

72 COLORADO BERTHOUD PINK

Company Name: Colorado Stone Co.

Quarry Location: Near Berthoud, Col. (Mail address: Longmont, Col.)

Texture: Very fine-grained, closely cemented, fine texture

Color: Light-colored stone of soft, delicate light pink to orchid shades

Geological Designation: Quartzitic Sandstone

Weight: 156 to 162 pcf

Furnished As: Dimensional, Splitface, Ledgestone, Flagging, Heights—1" to 3", 1" to 6"; 34" to 2"; 6" to 11". Lengths—12" to 12'

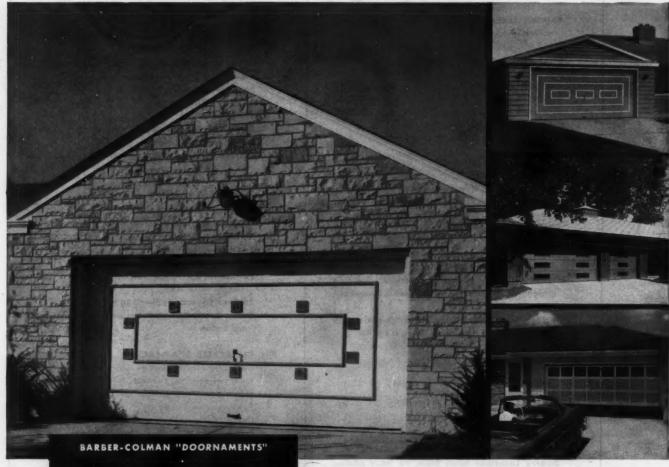
Surface Coverage: Splitface—40 to 44 sq. ft. per ton. Flagging—120 to 140 sq ft per ton

Other Comments: This stone is from the Lyons Ledgestone formation



add distinctive individuality
to modern homes with readilyavailable decorative "Doornaments"

You know the importance of good, individualized design in garage doors today. But do you know how extremely easy it is to achieve? Just take a standard Barcol OVERdoor—panel or flush type—and mount ready-made decorative "Doornaments" in practically any design arrangement you want. Costs very little extra, adds a lot of extra character, extra value to the home! Shown below are but a few of the innumerable ways Barcol OVERdoors can be individualized. At first glance they look "custom-made" and expensive . . . but they're not. They are simply standard OVERdoors with attractively positioned, stock-item "Doornaments." FREE DESIGN SERVICE makes it simple as A.B.C. for you to get the exact effects you want. Call your local Barber-Colman distributor now (listed under "Doors" in phone book).



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- 3. INDIVIDUALIZED DESIGN New Doornaments make standard doors into custom designs at only fractional extra cost. For free design service, call your Barber-Colman distributor (under "Doors" in phone book), or write:

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Dept. P55, Rockford, Illinois

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Products • Metal Cutting Tools • Machine Tools • Textile Machinery

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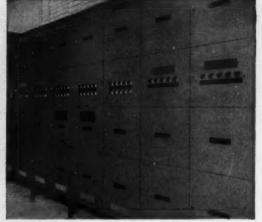
ELECTRIC-ELECTRONIC

Control Centers

In Milwaukee, Wisconsin Telephone Company engineers specify better control . . . electrically

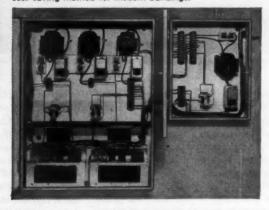
Electric-electronic controls have been specified again by telephone engineers . . . this time in Milwaukee for the new and existing Headquarters buildings of the Wisconsin Telephone Company. Electric-electronic controls are used throughout the new six-story addition (foreground), completed late in 1954. Modernization of the nineteenstory older building is in process - electric-electronic controls have been installed on eight floors to date. The speed, flexibility, accuracy, and reliability of electrical equipment were big factors in the selection, plus savings on original cost of the controls, installing labor and materials, and maintenance.

Architects (both buildings): GRASSOLD-JOHNSON & ASSO-CIATES. Consulting Engineer (new building): JOSEPH VOLK, deceased. Consulting Engineers (remodeling old building): LOFTE & FREDERICKSEN. Heating Contractors (both build-ings): PAUL J. GRUNAU CO. Ventilating Contractors (both buildings): REINKE & SCHOMANN, INC. In new addition, all radiators, convectors, and reheat coils are individually controlled with electronic outdoor reset on the hot water supply. Remodeled building has Barber-Colman controls for ventilation, reheating coils, and direct radiation.



Modern "Control Center" (above) in remodeled building serves as central junction box, houses prewired accessories, numbered terminal strips, indicating lights, remote starting buttons, etc. A Uni-Flo "VF" Grille provides ventilation of

Another "Control Center" (below) in new building serves as "nerve center" to speed field installation, expedite checking, simplify revisions and servicing. It's the fast, cost-saving method for modern buildings.



(Below) One of twenty-four compartments comprising the 8' \times 16' "Control Center" in remodeled building. This type of installation exemplifies latest cost-saving techniques in automatic control system engineering.



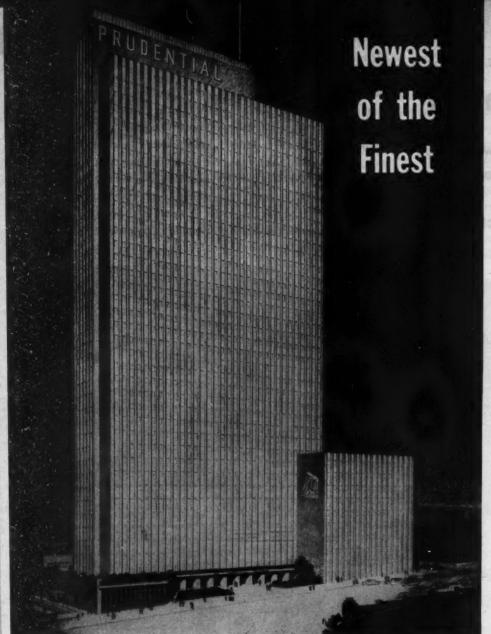
Rapid response of electronic controls appealed particularly to the telephone engineers. Controls for the lobby compensate instantaneously for heat loss through front doors. Controls on fresh air supply adjust mixture continuously for improved comfort conditions. "Better control . . . electrically" is now practicable for most installations in large or small buildings. Phone your nearby Field Office, or write us for data, prices, and expert engineering service on any automatic control problem.

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Prudential Building, Chicago . Naess & Murphy, Architects . Geo. A. Fuller Co., Contractors

The new Prudential Building will soon rise 600 feet above the shore of Lake Michigan, and become a distinguished addition to Chicago's skyline. This mid-America headquarters of the Prudential Insurance Company will contain more space than any other building used exclusively for offices in Chicago.

As a building, it will take its place among our country's finest structures and is a perfect example of the features a well-informed investor is willing to put into the space he plans to use and rent. For instance, to prevent future obsolescence and to meet the increasing requirements of modern electronic office

equipment, architects Naess & Murphy have prepared the new Prudential Building to handle the highest electrical load of any office building yet built. To do this job easily, and to permit layout changes and additions at minimum cost, Robertson Q-Floor construction is being used. This strong, light-weight, steel, cellular structural floor is the only construction material available which provides easy electrical access over every 6-inch area of the entire exposed floor. For more good reasons why fine new buildings all over America have turned to Robertson Q-Floor construction, see the opposite page.

Q-FIOOR

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a product of **H. H. Robertson Company** 2404 Farmers Bank Building • Pittsburgh 22, Pa.

Offices in All Principal Cities



World-Wide Building Service

A 13 ROUNDUP

(Continued from page 227)

HUGE VENETIAN BLIND for RCA Is Motor-operated in Control Room

A huge Venetian blind, 88 ft long by 18 ft high, has been engineered for New York City's RCA Exhibition Hall in order to eliminate a serious sun problem.

The problem arose with the morning sun, which shone through the big windows of the Exhibition Hall, causing Dave Garroway to squint during his news program and also producing a shimmer on the receiving TV screens. RCA wanted to keep out the sun's rays without impeding the vision of sidewalk audiences, and the answer was a motorized blind.



Big blind assembled in Warner studio

Many considerations were involved in building the giant blind. Two of the most important were where to build it and how to install it without interfering with scheduled telecasts, and how to motorize it to be operated by remote control. The blind was assembled in an old Warner Brothers studio in Brooklyn, which had catwalks and balconies big enough for snaking in the two miles of slats and testing the blind. After completion the blind was delivered at midnight on a special 105-ft trailer.



Blind installed in Exhibition Hall

Three electric motors control the 1584 sq ft of blind. It can be raised, lowered, tilted either way or completely lowered for cleaning by pushing buttons in the TV control room. Special safety and electronic devices required 29 electric wires to complete the circuit.

The 114 slats of the blind, which was made by Levolor Lorentzen, Inc., are a special linen-like finish on metal which does not reflect highlights or show dust. Stainless steel cables are used instead of cord. Thirty-one extra-strong tapes are in a gray linen pattern to match the slats.

A I TROUNDUP

PLYWOOD STANDARD Issued on Performance and Appearance

A new standard issued by the National Bureau of Standards sets forth basic specifications for nine grades of interior type and seven grades of exterior type Douglas fir plywood. Requirements are designed to provide the most economical stock panel possible for any given use need.

The standard, U. S. Commercial Standard CS45-55, affects annual production of about 4 billion feet, accounting for about 75 per cent of the nation's total plywood output, and calls for a number of changes in grading rules. Some of the most significant are:

1. It establishes a new low-cost underlayment grade identified by the industry grademark Plybase. This is a sanded structural grade of fir plywood with one "repaired" surface smooth and solid enough to be used under all kinds of resilient flooring.

2. It sets up two new "special order" items with outstanding appearance quality for use with clear or natural finish.

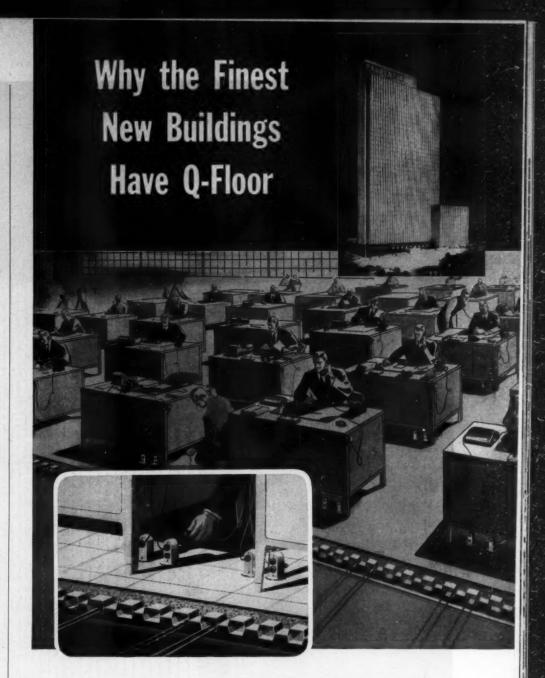
3. It imposes new requirements improving the appearance of "A" veneer, which is the highest quality veneer presenting a smooth surface suitable for finishing or painting.

4. It sets up standardized requirements for overlaid fir plywood, which has smooth, resin-impregnated fiber surfaces permanently fused to both panel faces.

5. It provides for fortification of interior type adhesives used in structural grades of fir plywood.

Conformance with the standard's rigid performance requirements in panels bearing industry-owned grade-trademarks is assured by a joint system of industry-wide quality control and inspection administered by the Douglas Fir Plywood Association.

- Fir plywood will be acclaimed from June 19 to 21 in Portland, Ore., in celebration of the Golden Jubilee of the Douglas Fir Plywood Association.
- The National Plumbing and Heating Exposition will be held from June 6 to 9 at Navy Pier, Chicago. Approximately 175 manufacturers of plumbing, heating and home appliances will display their lines.



Beyond the fact that Q-Floor offers the greatest electrical availability of any structural floor in existence (as indicated in the above illustration), there are several other vital reasons why it has become a part of the finest new buildings in America.

Q-Floor saves construction time and money. The steel cellular units come on the job cut to fit so that two men can lay 50 square feet in one minute. In the case of the U. S. Steel-Mellon Bank Building in Pittsburgh, forty floors were installed in four months. Because Q-Floor provides a perfect platform for work and storage, 1,000 men were able to operate on the job without interfering with each other. Q-Floor saves steel

as a result of its favorable ratio of weight to strength. Footings and structural steel can be lighter than with ordinary construction. Moreover, Q-Floor saves drafting room time since completely predetermined wiring and mechanical layouts are not necessary. Because no combustible forms and shoring are required, there has never been a construction fire on a Q-Floor job. Add these features to low cost on wiring changes in the years to come, and it's easy to see why Q-Floors are a feature of America's finest new buildings.

The Robertson Technical Library contains data books on Q-Floor which should be part of every architectural and engineering library. Write to us.

Q-FIOOR

Backed by 24 Years' Experience and Thousands of Installations

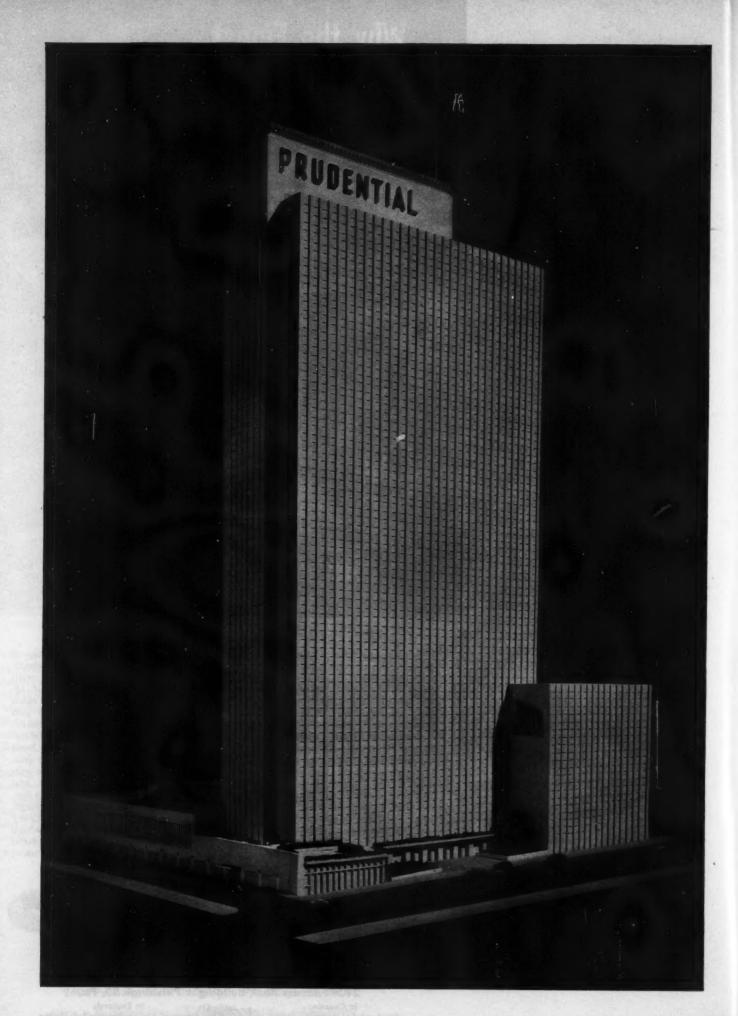
a product of H. H. Robertson Company

2404 Farmers Bank Building • Pittsburgh 22, Pa.

In Canada: Robertson-Irwin Ltd., Hamilton, Ontario



In England:
Robertson Thain Ltd., Ellesmore Port, Cheshire



PRUDENTIAL BUILDING, Chicago, III. (Now under construction.)
ROOFER M. W. Powell Co., Chicago.
ARCHITECT: Naess & Murphy, Chicago.
GENERAL CONTRACTOR: Geo. A. Fuller Co., Chicago.

New "Gibraltar" over Lake Michigan

The Prudential Insurance Company has long used the Rock of Gibraltar as a symbol of its strength. Now Prudential can point with pride to a manmade "Gibraltar" of its own—the magnificent new Prudential Building on Chicago's lake front. It is the tallest building in Chicago, the fifth largest office building in America—architecturally and commercially one of the most outstanding construction projects in recent years.

Two other notable new "Gibraltars" are the Prudential Buildings in Jacksonville and Minneapolis—both far and away the most modern and capacious office buildings in their respective regions.

Newsworthy and significant is the fact that all three of these important buildings will enjoy the superior protection of Barrett Roofs!

For generations leading American architects have consistently recommended Barrett Roofs for the protection of our most important public, commercial and industrial buildings.

BARRETT DIVISION, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y.; 205 W. Wacker Drive, Chicago 6, Ill.; 36th St. & Grays Ferry Ave., Philadelphia 46, Pa.; 1327 Erie St., Birmingham 8, Ala.; Melrose Building, Houston 2, Texas.



PRUDENTIAL BUILDING, Jacksonville, Fla. (Now under construction.) ROOFER. Ferber Sheet Metal Works. ARCHITECT. Kemp, Bunch & Jackson. GENERAL CONTRACTOR. Daniel Construction Co.—All of Jacksonville.



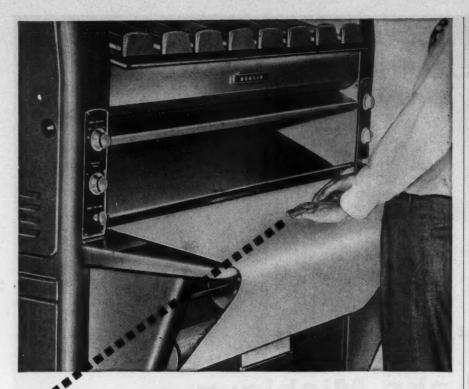
PRUDENTIAL BUILDING: Minneapolis, Minn. ROOFER: John A. Dalsin & Son. ARCHITECT: Magney, Tusler & Setter. GENERAL CONTRACTOR: C. F. Haglin & Sons—All of Minneapolis.



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New Streamliner 400...
prints on sheets or continuous
roll stock up to 42" wide,
as fast as 24' per minute...
improved design, superlative
performance, best value
among lower priced whiteprint
machines.

A 1 PRODUCTS

(Continued from page 229)

KITCHEN, LAUNDRY EQUIPMENT

Hotpoint's Golden Anniversary year is being marked by the introduction of new lines in all product areas. Three new disposalls include two deluxe types (MW9 and MWP9) and one standard continuous-feed type (MW10). A new built-in ensemble of matched equipment includes an oven and surface units, twodoor refrigerator-freezer and automatic dishwasher. Five new refrigerators comprise two single-door refrigerators and one two-door and two single-door refrigerator-freezer combinations. A new "Calrod" unit for faster cooking is featured on surface cookers. Three automatic electric clothes washers list a Super deluxe lighted pushbutton model (LK2), a deluxe pushbutton model (LJ2) and a low-cost rotary dial model (LH7). Two automatic electric clothes dryers are a deluxe model (LG2) and an air blower model (LB1). Hotpoint Co., 5600 West Taylor St., Chicago 44, Ill.

REFRIGERATOR-FREEZER

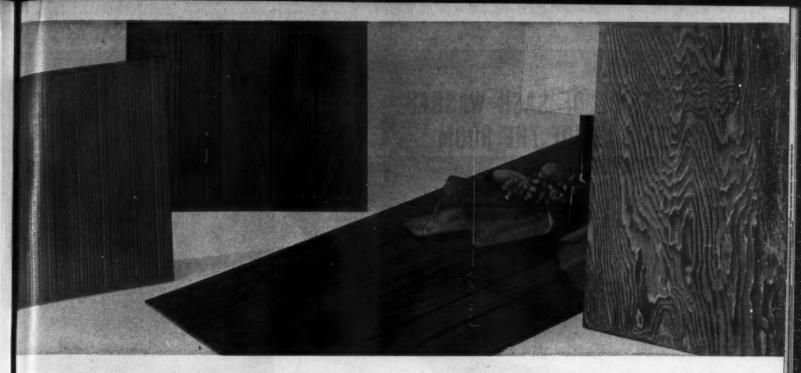


The Foodarama combines a freezer and refrigerator, each with separate upright doors, in one unit. The separately insulated freezer, on the left, stores 166 lb of food. The automatic defrosting refrigerator, on the right, has roll-out shelves and slide-out baskets. Both have in-the-door storage space. Kelvinator Div., American Motors Corp., 14250 Plymouth Rd., Detroit 32, Mich.

SHELVING EQUIPMENT

E-Z shelving equipment consists of three basic elements: metal standards, which are screwed into the wall; shelf brackets, which are clamped by a single bolt to the standard; and shelves, which rest on the brackets. The prefabricated elements can be combined in wall shelving, display cases, island displays or tables. Standard Steel Works, 16th and Howell Sts., North Kansas City, Mo.

(Continued on page 248)



WELDTEX. Here in painted fir; also in gum and Philippine mahogany. Prices from \$25**.

PLANKTEX. In natural or pre-finished Philippine mahagany. Pre-finished costs \$41**.

V-PLANK. In oak, walnut, Korina®, Hon-duras mahogany, Samara*. Starts at \$44**.

SEA SWIRL. Clear, weathered-look paneling without knots-\$30**; knotty Surfwood-\$22**.

Give homes new beauty, a new kind of appeal with Weldwood textured woods . . . at a cost as low as \$23 for an 8' x 12' wall!

Weldtex®-patented by Weldwood, Only from Weldwood can you get the original striated paneling that started the textured wood trend; fine for natural or painted finish. Comes also in exterior grade for siding; striations assure no grain raising or checking. Thicknesses: interior 5/16", 3/4" in fir only; exterior 3/8".

Planktex* combines the striations of Weldtex with alternate bands of smooth wood. Comes unfinished or completely pre-finished ready to apply. Thickness-5/16". Sea Swirl® and Surfwood® look like weathered driftwood; fine for dens, playrooms, cabins; texture hides nail holes. Thickness-5/16".

V-Plank* features vertical grooves that give the effect of random planking. Comes already pre-finished by

fir with knots and , dramatic look; Also perfect for ays and fences.

8' sheets, as well

your Weldwood States Plywood

EXTURED VOOD PANELS

Dragnization

	skilled woodcraftsmen. Thickness—¼ Texture 111° siding is exterior grade a unsanded faces; gives rough-textured can be installed without sheathing. gable ends, soffits, carports, breezew Thickness—%". All panels available in standard 4' x as other sizes.
HE SE	Send coupon for more details or visit lumber dealer or any of the 82 United showrooms in principal cities. **For an 8' x 12' wall. WELDWOOD** WELDWOOD** WELDWOOD** WELDWOOD** **Port on 8' x 12' wall.
	United States Plywood Corporation Box 61, New York 46, New York
	I'd like to know more about Weldwood Weldtex Planktex Sea Swirl at V-Plank Texture 111 . Name . Address
SAMARA V-PLANK in this basement recreation ro (for built-ins use regular Samara).	om costs only \$44 for an 8' x 12' wall City. City.

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WITH NEW GETTY OPERATOR AND HINGE FOR POPULAR AWNING-TYPE WINDOWS

Easier window cleaning is but one of the advantages you can offer with this new No. 4711 Getty Operator and Hinge Set.

This Getty Operator works on a new and unique principle. It has a special kind of chain that becomes fully rigid when extended in opening an awning-type window. The operator holds the window firmly in any open position. It closes and locks the window securely without disturbing the screen—and without the separate lock many other operators require.

The hinge drops the sash from the frame, so that the outside of the

window can be easily cleaned from inside the room. And both operator and hinge can be quickly and easily installed. There's no complicated hardware to fuss with or get out of order.

Specify Getty No. 4711 Sets for windows from 14 to 30 in. high and up to a maximum width of 48 in. Set #1 is for windows 14-17% in. high; Set #2 for windows 18-23% in. high; Set #3 for windows 23% 30 in. high. For complete information, including specification data, see your hardware consultant or write us direct now.



New Getty Operator and Hinge Set is easy to install. There's no complicated hardware.



Special Getty chain becomes fully rigid when extended—locks window in any position.

Remember — More Getty Operators Are Used on Casement Windows Today Than All Other Makes Combined!

ment Windows Today Than All Other

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With this ANNOUNCEMENT of Porcenell Chalkboard, it is not an overstatement to say that a new concept in modern school chalkboard history begins. BENJAMIN ELECTRIC, long a pioneer in lighting, is proud to follow its advancements in school illumination with this further advancement in better seeing and instruction.

Never before a

CHALKBOARD like this!

EN/AMIN

Chalk "flows on" with minimum pressure due to micro-fine, super-hard, "suedecoated" surface which also facilitates era-

Maintenance

Writing and Erasing are a Pleasure!

sure; eliminates ghosts.

Superior Durability Never needs replacement due to age . . . will not become shiny in a lifetime of normal use; cannot fade ... completely resistant to moisture . . . cannot warp.

Quicker, "care-free" cleaning with water restores board to original efficiency; there are no deep pores to retain chalk particles; dulling is thus eliminated.

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NOT slate, glass or plastic ... NOT conventional porcelain enamel... NOT composition board ... its an ENTIRELY NEW TYPE VITREOUS ENAMEL Chalkboard

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Address

1955 Benjamin Electric Mfg. Co

Porcenell is a patented, vitreous process developed by Vitreco, Inc., a research organization jointly owned by Youngstown Sheet and Tube Co. and Poor and Company. The Porcenell development is the result of over 15 years and three quarters of a million dollars of research. In this product there has been achieved an entirely new, non-warping, lighter weight, finer, vitreous, hard chalkboard surface never before commercially available.

BENJAMIN PORCENELL Chalkboards are available through:

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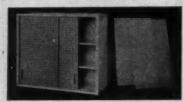
A PRODUCTS

(Continued from page 244)

FOOD WASTE DISPOSER

A new food waste disposer has a "tele-scoping" adjustment that allows the disposer to be moved up or down to fit any plumbing rough-in without changes in existing plumbing. The Telex Deluxe has a Robot-Rotor feature which is an automatic grind selector. In-Sink-Erator Mfg. Co., Racine, Wis.

SLIDING-DOOR CABINETS



Pic-A-Dor steel kitchen cabinets are equipped with sliding doors of textured glass or plain or perforated hardboard that can be painted to match any color scheme. The white steel cabinets are also available without doors, but fitted with grooves and runners for custom-cut sliding doors. All cabinets have adjustable shelves. Tracy Kitchens, Edgewater Steel Co., 3125 Preble Ave., Pittsburgh 30, Pa.

SHOWER CABINET



Five new Craft shower cabinets are now available — the Riviera, the Bermuda, the Saratoga, the Newport, the Capri and the Champion. Highlights of the new line include terrazzo receptors, smooth, rounded corners flanking the doorway and larger shower heads. Cutter Metal Products Co., 1025 Line St., Camden 3, N. J.

BREATHABLE UPHOLSTERY

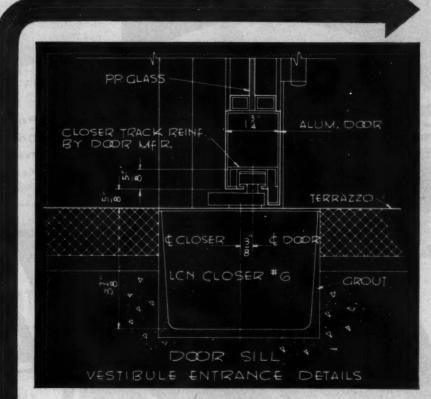
A vinyl upholstery material called "Castleton" and designed by Russel Wright is a plastic-coated fabric which permits the passage of air. E. I. du Pont de Nemours & Co., Room D-7145 (Allan Perry), Wilmington, Del.

CONCRETE BLOCK

- A ceramic-glazed concrete block makes possible the installation of a concrete block wall without the necessity of an additional finish. The Glasface block, in which a glassy finish has been applied to an aggregate-type concrete block, is available in a number of colors. Ferro Corp., 4150 East 56th St., Cleveland, Ohio.
- Multiple-web concrete blocks have five rows of spacings which increase strength, insulation and sound-proofing. Two

outer spaces contain dead air, and the three inner spaces allow for circulating air. These spaces not only increase the insulating value but also provide maximum surface area to absorb sound. The Webco units, said to be 25 per cent stronger than ordinary blocks, decrease moisture penetration and require no furring. They are constructed to withstand all climatic conditions as well as termites, dry rot and fire. American Webco Corp., 501 Broad St., Sewickley, Pa.

(Continued on page 253)



CONSTRUCTION DETAILS

for LCN Floor Type Door Closer, Shown on Opposite Page

The LCN Series 2-4-6 Closer's Main Points:

- 1. Full rack-and-pinion, two-speed control of the door
- 2. Mechanism concealed; lever arm disappears under door
- 3. Door hung on regular butts, its weight carried independently of closer
- 4. Closer easily adjusted or serviced without taking door down
- Installed with or without threshold; may be flush with threshold or with floor
- 6. Used with wood or metal doors and frames

Complete Catalog on Request—No Obligation or See Sweet's 1955, Sec. 17e/L

LCN CLOSERS, INC., PRINCETON, ILLINOIS



MODERN DOOR CONTROL BY LCN . CLOSERS CONCEALED IN FLOOR

NEW PLANT OF SAWYER BISCUIT COMPANY DIVISION OF UNITED BISCUIT COMPANY OF AMERICA, MELROSE PARK, ILLINOIS LCN CLOSERS, INC., PRINCETON, ILLINOIS





EASY SOLUTION TO FIVE DIFFICULT DESIGN PROBLEMS

... Milcor Metal Lath and Plaster

GIMBEL BROTHERS

ARCHITECT

GENERAL CONTRACTOR

PLASTERING CONTRACTORS SOUTHGATE SHOPPING CENTER MILWAUKEE, WISCONSIN

GRASSOLD-JOHNSON & ASSOCIATES,

HUNZINGER CONSTRUCTION COMPANY, MILWAUKEE

PAUL C. BAUMANN, MILWAUKEE JOHN E. GREGORY & SONS, INC., MILWAUKEE

ALFRED SCHMITT, INC., MILWAUKEE

The architects of Gimbel's new Milwaukee store had several problems to solve: (1) They wanted an open, spacious interior appearance. Yet, (2) they wanted individual departments to be easily distinguished — with clean partitions that could do double-duty as panels for signs and decorations, and as storage-area enclosures. (3) They wanted to screen off the massive, overhead air-conditioning and heating systems.

(4) They wanted the store to be well-lighted, without conspicuous light sources. And, finally, (5) they wanted it to be firesafe.

They found the answer to all these design problems in the exceptional versatility of Milcor Metal Lath and accessories.

Milcor Catalog No. 202 illustrates and describes the complete line of Milcor Metal Lath and accessories. Copies are available upon request.

Metal Lath for Strength — Plaster for Beauty

MILCOR* METAL LATH

NLAND STEEL PRODUCTS COMPANY • PLANTS and BRANCHES: BALTIMORE 5, MD., 5300 Pulaski Highway — BUFFALO 11, N. Y., 64 Rapin Street — CHICAGO 9, ILLINOIS, 4301 S. Western Avenue Blvd. — INCINNATI 25, OHIO, 3240 Spring Grove Avenue — CLEVELAND 14, OHIO, 1541 E. 38th Street — DETROIT 2, MICH., 690 Amsterdam Avenue — KANSAS ČITY 41, MO., P. O. Box 918 — LOS ANGELES 58, ALIF., 4807 E. 49th Street — MILWAUKEE 1, WIS., 4101 W. Burnham Street — NEW YORK 17, N. Y., 230 Park Avenue — ST. LOUIS 10, MO., 4215 Clayton Avenue



IT'S MILCOR CELLUFLOR FOR NEW COMMERCIAL CREDIT BUILDING

Baltimore's Newest — Designed by Harrison and Abramowitz and Constructed by Consolidated Engineering Company,—will have the Last Word in Electrified Sub-Floors

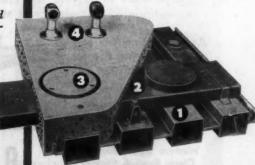
Milcor Celluflor, latest cellular floor development, is truly the "Floor of the Future". It meets the changing, growing need for electrical flexibility to provide for electronic office equipment and business machines. Its closely spaced raceways permit the installation of communications or power outlets at virtually any point on the floor. Furthermore, these outlets can be relocated — or new ones added — without expensive alterations.

Only Milcor Celluflor offers all these features:

- Structural strength of close cell spacing eight steel webs every 24 inches.
- Potential electrical outlet every 6" of exposed floor.
- Unexcelled protection of Inland TI-CO† galvanizing.
- Safe working floor for all trades during construction.
- Lower over-all building cost wood forms, staging and shoring eliminated faster construction earlier occupancy.

We'll be happy to send further information at your request.

Milcor Celluflor (with Walker electrification) has (1) closely spaced cells protected by Ti-Co galvanizing; (2) large header duct that carries wiring from distribution point to panel cell; (3) easyaccess units that are inset to accommodate floor covering; (4) outlet fittings for telephone and power.



MILCOR CELLUFLOR



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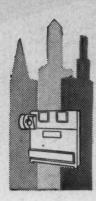
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STEEL PRODUCTS COMPANY 4033 WEST BURNHAM STREET · MILWAUKEE 1, WI

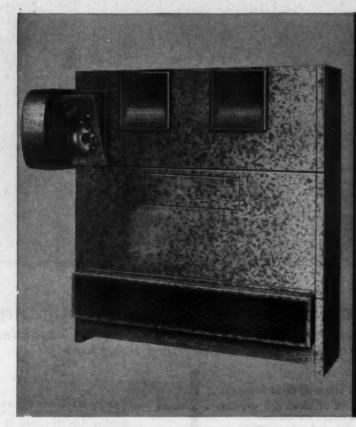
towering



quality

WATER SAVING COOLING TOWER

with All-Metal hot-dip galvanized construction for longest life - fastest heat transfer



FEATURE FOR FEATURE ACMIL GIVES MORE

- 1 Modern, compact all-metal construction no wood to rot, no painting required.
- Steel is completely hot-dip galvanized after fabrication for maximum rust and corrosion protection.
- 3 Quiet, blower-induced constant volume air flow.
- 4 Wetted metal deck principle—fastest heat transfer.
- 5 Pumps built specially for cooling tower service.
- 6 All functional parts easily accessible for cleaning.
- 7 Flush-type air inlets and outlets.
- 8 Full capacities delivered as rated.
- 9 Can be installed in any location indoors or out.

Your clients will receive maximum cooling tower value for their dollars when you recommend and specify ACME. Built by a firm with 35 years' experience in serving the refrigeration and air conditioning industries, ACME cooling towers

combine advance design with quality construction. This means top performance and long life service with minimum maintenance cost.

Write today for your copy of the ACME Cooling Tower catalog.

Acme Cooling Tower is serving firms like these . . .

Cincinnati Milling Machine Co. **Bell Telephone Batelle Memorial** Western Can Company Chase Brass & Copper Ford Motor Corp. Revere Corporation









Working with architects, engineers and manufacturers on Air Conditioning and Refrigeration since 191

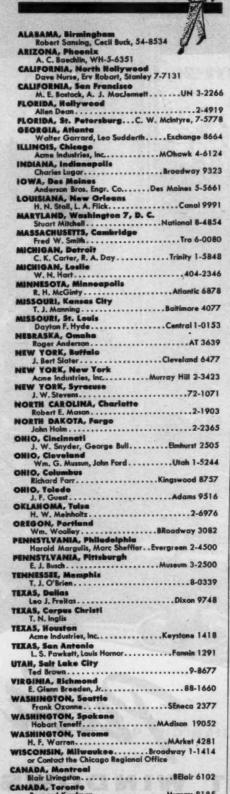
ACME INDUSTRIES, INC.

JACKSON, MICHIGAN



for help on your air conditioning or refrigeration problems phone your

Acree engineer



PRODUCTS

(Continued from page 248)

AIR ENTRAINING AGENT

An air entraining agent for concrete incorporates controlled air into the concrete mix for better application and greater durability. Permite N-Tair, a low-viscosity, homogeneous solution, is guaranteed by the manufacturer not to segregate, settle out, become gummy or lose efficiency under adverse conditions such as low temperatures. Permite Curing Compound Dir., Aluminum Industries, Inc., 2438 Beekman St., Cincinnati 25, Ohio.

LUMINOUS CEILINGS



· Luminous ceiling panels for wall-to-wall shadow-free lighting can be located close to the light source and so are particularly suitable for existing buildings with low ceilings. Guaranteed against deterioration by ultra-violet light, the panels are dimensionally stable and scientifically formulated for correct color. The Watertown Mfg. Co., Watertown, Conn.



· A luminous ceiling of white translucent, corrugated vinyl rests on extruded aluminum channels under Pittsburgh fluorescent or slimline strips. The "Luma-Ceiling" can also be installed with an auxiliary spun-glass acoustical baffle for sound absorption. The installation shown above is the Paramount Garment Shop in Philadelphia. Pittsburgh Reflector Co., 403 Oliver Bldg., Pittsburgh 22, Pa.

(Continued on page 257)

You owe it to yourself ... to know the important points of difference between Arcadia and other types of sliding glass doors. Spend just a few minutes with Arcadia's new 1955 catalog and decide for yourself. See it in Sweet's-phone your Arcadia distributor -or wire us collect for prompt action.

there's more to



sliding glass doors than meets the eye!

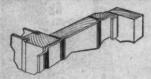


air conditioning or refrigeration problems phone your

STOUGORS - E A

for help on your

the warm, friendly wood casement...with a backbone of steel



PELLA WOOD CASEMENT WINDOWS combine the beauty and insulating qualities of wood with the

strength of steel. For a 16-gauge steel frame reinforces the sturdy wood lining to provide maximum rigidity. This steel frame extends the full width of the 51/4" jamb and is continuous around all four sides of the windows. The hinge butt plate is anchored to the solid steel frame. That's why PELLA CASEMENTS always hang true and can be furnished with glass sizes up to 24" x 60"— the largest wood casement sash on the market.

The wide range of PELLA stock sizes in modular widths, used singly or in combination, makes it possible to create perfect window arrangement for every design concept. Glass sizes are 16", 20" and 24" in width and range up to 60" in height. Furnished with both horizontal and vertical muntins, with horizontal muntins only, or without muntins.

PELLA CASEMENTS fit snugly in all types of wall construction. They are completely assembled with hardware fitted at the factory.

A quality window competitively priced. Investigate today. See our catalog in Sweet's or mail the coupon today for free literature. Distributors are located in major cities of U. S. and Canada.



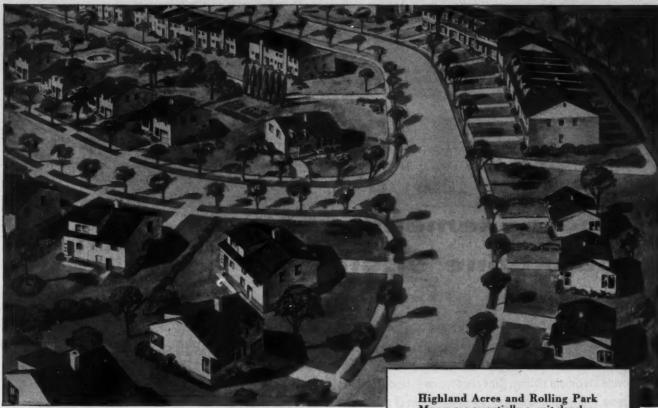


CLIP AND MAIL TODAY

ROLSCREEN COMPANY, Dept. G-5 PELLA, IOWA

Gentlemen: Please send free literature on PELLA CASEMENT WINDOWS, with name of nearest PELLA distributor.

FIRM NAME



Developer and Plumbing Contractor "team up" with **AllianceWare Fixtures** in Merchandising 300 Homes

When Ted Bentley and Fred Wallace, Jr. began planning Highland Acres and Rolling Park Manor homes sites in the City of Chester, a suburb of Philadelphia, Pennsylvania, their previous experience in home development made them realize the extreme importance of fine bathrooms as a home sales-feature.

So it was a natural for them to team up with their plumbing contractor-Madsen Plumbing and Heating Company-in selecting sanitary ware fixtures that will be sales features in each of

Manor are essentially a unit develop-ment featuring single-level and splitlevel homes in contemporary style. When completed, the area will comprise three hundred homes ranging from \$10,000 to \$14,000. All homes will be equipped with AllianceWare fixtures in color. The rolling topography and winding streets will provide a parklike appearance.

Builders — Ted Bentley and Fred Wallace, Jr.
Architect—Jack Swerman
Plumbing Contractor — Madsen Plumbing and
Heating Company
Plumbing Wholesaler—J. Levitt, Inc.

the 111 multi-level units and 146 row-type houses which are planned.

Their selection is AllianceWare - chosen for several practical reasons. Both organizations believe in AllianceWare because of past performance on previous projects of similar character. Second, the wide choice of the beautiful colors of AllianceWare makes possible the keying of decoration arrangements in pleasing variety, and third, the popular acceptance of AllianceWare in the Philadelphia area will be a distinct aid in successful selling.

ALLIANCEWARE, INC. Alliance, Ohio

BATHTUBS • LAVATORIES • CLOSETS • SINKS

Plants in Alliance, Ohio and Colton, California

A PRODUCTS

(Continued from page 253)

TWO-TEMPERATURE HEATER

An automatic gas water heater with a solid aluminum tank supplies two temperatures of hot water. It provides 180 F water needed to maintain 160 F or higher tub temperatures in automatic dishwashers and clothes washers and also from the same tank 125 F water for bath, lavatory and other general use outlets. The extra hot water is piped direct to the automatic appliances and thus never comes in contact with the hands. Rund Mfg. Co., Kalamazoo, Mich.

HOT-WATER HEATING



Forced hot-water heating in the Hydro-Heat System presents a new approach to air problems. A water accumulator which replaces the conventional expansion tank eliminates contact between air and water. A simplified purge header has a single purge valve for the entire system instead of a valve for each circuit. A semi-recessed, convector-type air conditioning unit is also available. Warren Webster & Co., Camden, N. J.

ALUMINUM BUS BARS

Bus duct with aluminum bus bars is 35 per cent lighter than its copper counterpart, has double silver-coated aluminum bars to provide low resistance contacts as joints. It is available in ratings of 225 through 4000 amp. Westinghouse Electric Corp., P. O. Box 2099, Pittsburgh 30, Pa.

ALUMINUM RAILINGS

Tubular aluminum railings have a bolt-through construction which ties the ½-in.-thick extruded members together making them vibration-free and impact-resistant. Welding is eliminated, so that discoloration at the rigidly reinforced joints is absent. Newman Bros., Inc., Cincinnati 3, Ohio.

(Continued on page 260)



HARVEY HUBBELL, INC. DEPT. AR, BRIDGEPORT, CONN.

CLEAR PRISMATIC GLASS

AMCOLENS

tomorrow's lens lighting TODAY!

AMCOLENS, an advanced concept in lighting, is the ultimate for the improved illumination of tomorrow.

The precision engineering of AMCOLENS clear prismatic glass lens offers you the lighting of the future with all these unique advantages:

- Crystal clarity
- Undiminished light transmission efficiency
- Unaltered white lamp light transmittance
- Precise light direction control
- Predetermined light distributions
- Minimum brightness in glare zone
- Edge-light on ceiling for contrast relief

83/8", 103/8", 131/2" Dia.

SEMI-FLUSH Three Sizes:

SEMI-FLUSH SYMMETRIC Four Sizes: , 81/2", 10 1/8", 12" Sq.



AMCOLENSES are the result of original ART METAL lens research and are available only in ART METAL complete lighting equipments.

This enlarged segment of Amcolens illustrates prism detail. AMCOLENS utilizes clear glass prisms, the most exact means known to science for controlling the direction of light.

A cross section of a typical Amcolens shows control of light. Precision engineering achieves multiplied useful light utilization below 60° with minimized glare zone brightness.

AMCOLENSES ARE ANOTHER Lighting Research DEVELOPMENT OF ART METAL

18 AMCOLENSES

are precision engineered for specific lighting applications.

DEEP ASYMMETRIC One Size: 10% 5q.

One Size

TWO-LIGHT DEEP SYMMETRIC One Size:

LENSDRUM Three Sizes:

91/2 11 % , 13 % Dia.

May we send the new catalog?

ART METAL Catalog 255, dedicated to the advancement of incandescent lighting through original research development, provides detailed information on Amcolens, plus factual data on all ART METAL lighting equipment with unbiased test data on lighting performance, evaluated by Electrical Testing Laboratories, Inc.

Write to:

WALLENS One Size: 11½" Length DEEP SYMMETRIC Three Sizes: 8½", 10¾", 12" Sq.

> AREALENS One Size: 71/2" Dia.



The ART METAL Company

CLEVELAND 3, OHIO



BYRNE BUILDS for UNITED

Byrne Canopy Type Doors have, for many years, been consistently specified by major air lines for their maintenance hangars. This Type K door is installed at the United Air Lines Maintenance Base at South San Francisco.

Built in two sections, one 103' and the other 77' wide, the door provides a closure 180' x 50'. The sections may be operated individually or simultaneously. They are motor operated, upward-acting, with balanced suspension through cables which transmit dead loads to compact counterweights. Like all other Byrne Hangar Doors, this installation provides the features of fast operation . . . snug weathering . . . minimum maintenance . . . savings in floor space . . . and complete safety under all operating and weather conditions.

Byrne engineers have had over 25 years' experience in the development of doors of all kinds, and particularly in the design and construction of hangar doors. Their abilities can be put to work for you . . . at any time.



A PRODUCTS

(Continued from page 257)

ALUMINUM ESCALATOR



Escalators with ribbed risers of die-cast aluminum are possible because of close tolerances in modern die-casting methods by the Precision Castings Co., Inc., Fayetteville, N. Y. They are expected to improve operation and increase safety, as well as reduce weight. Otis Elevator Co., 260 11th Ave., New York 1, N. Y.

SIDING



- Shadowgroove siding of \$\%\epsilon\$-in. Tempered Presdwood has \$\%\epsilon\$-in.-wide by \$\%\epsilon\$-in.-deep grooves, spaced 4 in. on center, which give the panels the appearance of vertical board construction. The shiplap edge treatment, with a \$\%\epsilon\$-in. overlap on one edge and a 1%-in. underlap on the opposite edge, forms the groove at the joint. The siding is available in 4- by 8-ft panels or any combination of lengths that can be cut from a 16-ft panel. Shadowgroove can be nailed directly to studs or over sheathing. Masonile Corp., \$111\text{ W. Washington Sl., Chicago 2, Ill.}
- Colored asbestos cement siding is made by a process which fuses two ceramic colors over a fireproof asbestos cement core. The striated siding can be washed off with soap and water and never needs painting. Shake Design Glatex comes in 27-in.-wide shingles and is available in Dover White, Meadow Green, Ranch Brown, Bamboo Ivory and Sheffield Gray. U. S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

(Continued on page 262)

Something New Under the Sun Alodized Aluminum Roofing

No. 1 in a series on protective finishes for architectural aluminum.

On the Overly aluminum roof for Wyoming State Hospital, "Alodine" greatly increases corrosion-resistance, provides a matte-green finish that simulates the patina of copper and is sunfast and stable, reduces glare, and masks reflectivity.



Wyoming State Hospital, Evanston, Wyoming
Roof By: Overly Manufacturing Co., Greensburg, Pa.

What Alodizing is AND WHY YOU SHOULD SPECIFY IT.

"Alodizing" is a process using the ACP chemical "Alodine" that converts the aluminum surface to a continuous non-metallic layer. It adds years to the metal's resistance to corrosion, and provides a perfect bond for paint, lacquer, vitreous enamel and adhesives.

One type of "Alodine" protects aluminum yet preserves the original appearance of the metal; another produces a sun-fast stable green that ranges from a grey-green iridescence to the deep patina appearance of weathered copper; still another produces an iridescent brown.

All types reduce glare and reflectivity. All add to aluminum's usefulness and durability, particularly at the seaside, in industrial areas, and in contact with mortar.

IF IT'S ALUMINUM, BE SURE IT'S ALODIZED.



A few of the many typical building products that should be Alodized: Roofing, Siding, Shingles, Gutters, Spouting, Jalousies, Screens, Hardware, Awnings, Blinds, Wall Tile, Sash and Door Frames, Curtain Wall Panels, Partitions, Heat and Vent Ducts, Trim, Cabinets, Refrigerating and Air Conditioning, Furniture Equipment, Light Fixtures.

For further information on Alodized aluminum, and other applications of the "Alodine" finish, write or call.

Alodine Trademark Reg. U.S. Pet. Off.

Since 1914, Pioneering Research and Development in Metal Protection

AMERICAN CHEMICAL PAINT COMPANY

DETROIT, MICH.

Ambier, Penna.
NILES, CALIF.

WINDSOR, ONT.

(Continued from page 260)

COMMUNICATION SYSTEMS

• Two improved communication systems have been announced by Executone—one for schools and another for hospitals.

The School communication system incorporates into a single system two-way intercommunication, paging, public address, AM-FM radio, alarm program and time signal transmission. Single- and dual-channel facilities are both available. The dual system provides two separate channels for sound programs

and an additional one for intercom, so that three activities can be in progress at once. The administrator's control station provides instant two-way voice contact with every classroom, while a sound control rack controls the other operations. Pushbutton classroom selectors are provided for program distribution at the rack. Electronically simulated siren and gong take priority over other transmissions in the system. Classroom stations in surface wall-mounted models, have red "privacy light" to advise teacher that classroom is being called.



Multi Audio-Visual Nurse Call, permits the nurse away from her station to identify and accept a patient call and carry on a two-way conversation without returning to the desk. The highly sensitive system provides faithful voice reproduction and can transmit even the faintest sounds. An emergency signaling circuit for toilets and other locations operates with repeating chimes and flashing light which can be extinguished only after the nurse has gone to the patient. Executone, Inc., 415 Lexington Ave., New York 17, N. Y.



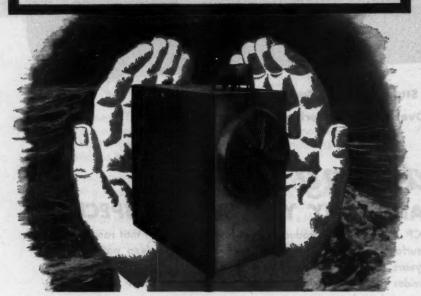
• The Auth audio-visual nurse's call enables the nurse, at her station, to monitor patients' rooms, individually or in groups. It consists of a two-way, amplified voice communication system with sensitive microphone-speakers at the nurses' stations as well as at the patients' bedsides. The nurse is also supplied with an auxiliary telephone handset. The Auth Electric Co., Inc., Long Island City, N. Y.

FORCED AIR HEATER

The Lifeguard model gas-fired, forced air heater is designed for the new home and modernization markets. Pyro-ceramic Armorcoat on the heating element ensures against rust or burn-out. Dual-Safe controls include a safety pilot, a high limit control against excessive temperatures and an extra 100 per cent watchdog control which will shut off all gas to the unit in the event extraordinary conditions impair the functioning of the standard controls. Day & Night Div., Affiliated Gas Equipment, Inc., 700 Royal Oaks Drive, Monrovia, Calif.

(Continued on page 266)

HALSTEAD & MITCHELL COOLING TOWERS



PROTECTED STEEL

for extra-long life!

Steel in cooling towers undergoes constant corrosive attack by both water and water treatment chemicals. H&M combats this rusting . . . adds years to tower life . . . by Protected Steel, a new concept in steel protection.

H&M steel cabinets are hydraulically painted with Vinsynite, Vinyl Zinc, and chlorinated rubber. Hydraulic painting forces these protections into openings . . . builds a solid wall against moisture. H&M fans and shafts are Stainless Steel, rust-proof, of course. Bolts are Everdur, for ease of future disassembly.

The Protected Steel concept is the concept of complete protection. That's what you get on every Halstead cooling tower.

and only HM offers

20 Year Guarantee!

on the wetted deck surface against rotting or fungus attack.

Write for Catalog WT & CT 583



BESSEMER BUILDING . PITTSBURGH 22, PA.





St. Patrick High School, Chicago, Ill. Edo J. Belli, Architect



Y.M.C.A. Swimming Pool, Oak Park, Ill. Philip D. West, Architect



Lincoln Elementary School, Sterling, Ill. Louis Kingscott & Associates, Architects



This seal is your assurance of highest quality Facing Tile.

FACING TILE INSTITUTE

1520 18th Street, N. W., Hudson 3-4200, Washington 6, D. C.

In the interest of better Facing Tile construction these companies have contributed to this advertisement. CHARLESTON CLAY PRODUCTS CO., Charleston 22, W. Va. • THE CLAYCRAFT CO., Columbus 16, Ohio • MAPLETON CLAY PRODUCTS CO., Canton, Ohio • METROPOLITAN BRICK, INC., Canton 2, Ohio • MCNEES-KITTANNING CO., Kittanning, Pa. • NATCO CORPORATION, Pittsburgh 22, Pa. • STARK CERAMICS, INC., Canton 1, Ohio • WEST VIRGINIA BRICK CO., Charleston 24, W. Va.

Electro Silv-A-King

REPORT CARD

control: Low brightness control achieved through the more equal distribution of down light and up light provide ideal illumination for better seeing.

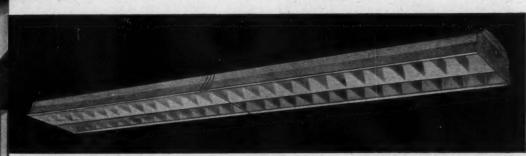
ADJUSTMENT: Available in 3 degrees of shielding: 35° x 25°—35° x 45°—45° x 45°.

appearance: Louver fins are equi-spaced for added attractiveness.
Give the appearance of one fixture when in continuous mounting.

CLEANLINESS: Easier to maintain due to the use of spring tension latches in all four corners—every four feet. Hinges from either side and is easily removed.

Report card on the new

20/20



newest, finest lighting for schools

First in its class! The new "20/20" is designed to rate highest in lighting efficiency, ease of installation and economy of operation. Restyled for added attractiveness, the complete line offers you new opportunity to provide more satisfactory levels of illumination within the limits of your budget.

Available in:

- · 2-lamp and 4-lamp 40W Fluorescent or Rapid Start
- · 2-lamp, 4 and 8-foot Slimline
- · 4-lamp, 4-foot Slimline
- 1 piece 8-foot channel using 4 40W lamps, 2 in parallel— 2 in tandem
- Metal or styrene side panels
 Available with Slide Grip Hanger for mounting anywhere along the channel.

Electro Silv-A-King, one of the industry's most comprehensive sources for every type of lighting, offers you two manufacturing and shipping points to insure rapid delivery of Fluorescent, Incandescent and Floodlighting fixtures for commercial and industrial use, indoors and outdoors. Only Electro Silv-A-King also offers you the "Basic Unit" which permits easy interchangeability of 7 luminaries on one basic chassis... and the "One-Man" Speedy Hanger that cuts installation man hours in half.

For completely illustrated catalog, write to . . .



ELECTRO SILV-A-KING CORP.

1535 S. Paulina St., Chicago 8, Illinois Spruce and Water Sts., Reading, Pennsylvania



When you specify siding shingles, select those that add most to the home you're planning. Any of the six Nu-Grain colors add so much... whether used alone, or in combination with one another. There's appeal, too, in the attractive Nu-Grain wood shake pattern. And the clear, pronounced shadow lines of the shingles, when laid, give that extra touch that really satisfies a client.

Low upkeep. Maintenance costs are cut to a minimum, as K&M Nu-Grain

Shingles never require protective painting. Made of asbestos fiber and portland cement, they won't burn, rot, or corrode. In fact, they become harder with age.

Details in Sweet's Files. See Sweet's Architectural Files for additional information on colorful K&M Nu-Grain Shingles. And while you're looking them up, check into K&M roofing shingles. They're partners in value with K&M siding shingles. For additional details, drop us a line. We'll gladly send complete data.



SILICONE-TREATED,

so water runs off!

Water-borne dirt, which ordinarily causes streaks under window sills and other trim doesn't readily gain a foothold on K&M Nu-Grain Siding Shingles. Water "balls up" instantly, and runs right off these shingles.

KEASBEY & MATTISON COMPANY · AMBLER · PENNSYLVANIA



A PRODUCTS

(Continued from page 262)

INSULATION

• An insulation blanket which is applied to the exterior side of studs rather than from the interior is pre-cut to the size needed on the job and packaged in compressed form, each carton containing an amount sufficient to insulate the walls of the average five-room house. After removal from the carton each sheet, as shown right, is stretched to its fullest dimension — 49 in. by 8 ft 3 in. Because the blanket is longer than the sheathing,



the extra length protrudes and seals any openings at the bottom plate. Reflective Kimsul "48" Sheathing Blanket is stapled to the sheathing board, which

then is nailed to the exterior side of the wall studs, or, in the case of wood sheathing, stapled directly to the wall studs. It is installed prior to the placement of warm air ducts, electrical wiring and plumbing, thus minimizing mechanical damage to the insulation. Kimberly-Clark Corp., Neenah, Wis.

• Combination asbestos and aluminum insulation blankels are being manufactured for 16- and 24-in. joist centers to meet unusually rigid fire regulations. Known as Infra Insulation Type 6AP and Type 4AP, they are made with inorganic, inert asbestos. The asbestos itself will withstand temperatures of 800 F before disintegrating. It is shielded on both sides by aluminum sheets which have a melting point of 1220 F and absorb and emit heat rays at a 3 per cent rate. Infra Insulation, Inc., 525 Broadway, New York, N. Y.



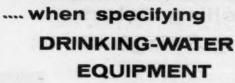
• A sprayed foam insulation which adheres to practically any type of clean, dry surface and also to moist surfaces will cover any irregular surface evenly. It is sprayed as a liquid and, after a few minutes, has swollen to a thick, airy cushion. After 15 min the foaming action has ceased, leaving a normal-looking semi-rigid insulation. It is claimed that Poly-Cell can be applied at any desired thickness in one coat, the most economical thickness being ½ to 1 in. It is non-combustible and can be colored for coating. Insul-Mastic Corp. of America, 1141 Oliver Bldg., Pittsburgh 22, Pa.

INSULATING BUILDING BOARD

A building board which both insulates and decorates is designed for restyling in attics, garages, summer cottages, farm buildings and commercial structures. Strong, rigid and lightweight, No. 20 Insulating Board is finished in light-reflecting white. It protects against termites and dry rot and has a flame-resistant surface. The boards are ½ in. thick, 4 ft wide and come in lengths of 6, 7, 8, 9, 10 and 12 ft. The Celotex Corp., 120 So. Lasalle St., Chicago 3, Ill. (Continued on page 270)

what they do means a lot to you





Here you see men testing, hour after hour... for capacity, for leakage, for accuracy of temperature and refrigerant controls, for correct setting of expansion valves... for every factor that can mean the difference between dependability and uncertainty.

It's factory-tests like these that make the Halsey Taylor nameplate your guide to assured performance, no matter what cooler or fountain you specify!





THE HALSEY W. TAYLOR CO., WARREN, OHIO

TWO TECHNICAL AIDS

for architects and kitchen planners

BLAKESLEE

call for **BOTH**

Send now for this
valuable complete engineering
data on Blakeslee-Built Kitchen
machines. If you have any problems on
commercial dishwashing department layouts,
our experienced representatives are available to you.
There is no charge for their service.

INQUIRE ABOUT SHOWING OF COLOR MOVIE...

"NOW I'M IN BUSINESS"

FACTORY METHODS SAVE KITCHEN DOLLARS

G. S. BLAKESLEE & CO., 1844 So. Laramie Ave., Chicago 50, Illinois

For multi-room air conditioning...

New smaller UniTrane Units

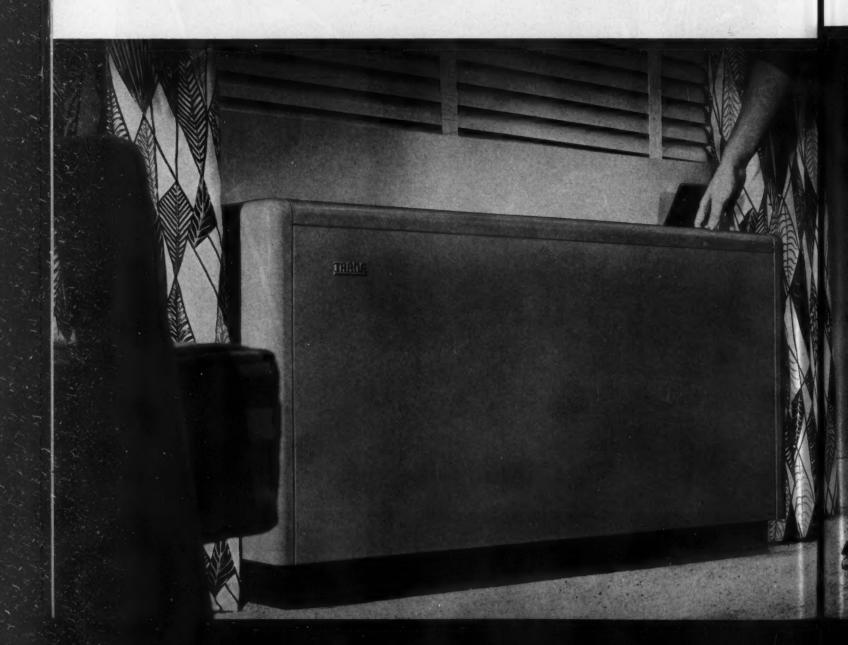
Everything you asked for in a completely new line, completely new design—the new Trane UniTrane air conditioning units! In 4 new sizes, 4 completely new models . . . same capacities but <u>reduced dimensions!</u>

You asked for a smaller, more compact cabinet. And the new UniTrane's got it! The smallest cabinet in UniTrane history. A scant 2½ sq. ft. floor area for the smallest unit. All models are surprisingly compact . . . save space, allow greater design freedom.

You asked for a new "slim look." And the new Uni-Trane's got it! The vertical model over-all depth— 9 inches slim! Or 25% slimmer than previous models. Hugs the wall—for clean, modern room design.

You asked for a low silhouette. And the new UniTrane's got it! The low, low look . . . vertical cabinet model is only 25 inches high. Top edge comes below the window line!

You asked for "whisper quiet" operation. And the new UniTrane's got it! Low coil face velocity is the reason. That means air is moved gently . . . without whistle, whine or wheeze!



... now 25% slimmer!

You asked for even greater flexibility. And the new Uni-Trane's got it! Round-edge end panels on cabinet model may be removed to facilitate butting unit to shelving. Rubber seal bonds unit to wall . . . gives free-standing models that built-in look. And the 4 new models—each in 4 sizes—that means you fit the air conditioning to the building . . . not the building to the air conditioning!

For year 'round comfort, plus outstanding beauty and operating efficiency, UniTrane is your answer. Single pipe circuit provides hot water for winter heating, cold water for summer cooling.

Want the Facts?

Get your advance copy of the new bulletin giving full particulars on the beautiful new UniTrane line. Just contact your nearest Trane Sales Office or write Trane, La Crosse, Wisconsin.

Furniture by Midwest Furniture Showrooms, Mpls.



SPECIFY TRANE MATCHED EQUIPMENT

CenTraVec hermetic centrifugal compressor. Only one major moving part. Starts, stops, runs unattended. Automatically adjusts capacity and horse power from 100% to 10% of load.



Cold Generator is the packaged water chiller for smaller installations. Engineered, built, tested and refrigerant-charged at factory. 10 to 100 tons.



Convectors replace bulky radiators when it is desired to leave existing heating system intact and use transom model UniTrane units for cooling only.



ne source one one responsibility

TRANE

MANUFACTURING ENGINEERS

One source, one responsibility for: Air Conditioning • Heating • Ventilating Heat Transfer Equipment

The Trane Company, La Crosse, Wis. • Eastern Mfg. Div., Scranton, Pa. • Trane Co. of Canada, Ltd., Toronto 90 U.S. and 17 Canadian Offices

(Continued from page 266)

INSULATING BLOCKS

A cellular glass insulating material which combines both insulation and ceramic finish in a single block is called Duraface Foamglas. It provides a durable, impactresisting surface with high insulating and moisture-proof qualities. Foamglas is completely inorganic and so will not rot or deteriorate and is resistant to nearly all chemicals. The blocks, 18 by 12 in. and either 3 or 4 in. thick, are



applied with hot asphalt or a cold adhesive. Pittsburgh Corning Corp., 307 Fourth Ave., Pittsburgh 22, Pa.

PREFABRICATED FIREPLACES



· The Acorn Fireplace, designed originally for Carl Koch's Acorn house, is now available commercially. Installation requires no masonry or structural changes and is easily adapted to existing house plans. It requires only a 6-in. flue. The Acorn can be hung from the wall with a modern cantilever effect or it can be mounted on black wrought iron legs, as in the picture above. Acorn Designs, Inc., Dept. 5-AR, Concord, Mass.



• The Uni-bilt Fireplace can be recessed into or mounted flush with any wall surface, combustible or non-combustible. The cantilevered hearth, 15 in. high, burns wood up to 27 in. long. Except for stainless steel trim, the unit is primecoated ready to be painted. Uni-bilt Div., Vega Industries, Syracuse 5, N. Y.

ELECTRIC CEILING VENTILATORS



Electric ceiling ventilators with combination grille and filter unit screen out grease and dust. Trade-Wind Model 2501, which delivers 425 cfm, and Model 1501, with 300 cfm, are optionally equipped with the new filter. The design of the combination unit includes a special grille about 1 in. deep into which the cleanable metal filter is fitted. Trade-Wind Motorfans, Inc., 7755 Paramount Blvd., Rivera, Calif.

(Continued on page 274)

Here's why

COLOR
A choice of 21 beautiful colors

STRENGTH .

roof . . . withstands mpact, fire, weathering

SIZES . Corrugated and flat panels in complete range of sizes

FINISH .

UNIFORMITY . Special production process as-sures best quality control

COST . Priced competitively in spite of superior quality and performance

More and more architects specify glass-fiber reinforced plastic building panels for functional and decorative applications.

Those wanting the best specify STRUCTOGLAS.

STRUCTOGLAS panels are made by an exclusive molding process that assures extreme and consistent accuracy and uniformity. That's why none can compare with STRUCT-

OGLAS for quality durability . . . reliability.

For complete specifications, Write for Catalog SL-46.



Structoglas is

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reinforced paneling

division of international molded plastics, inc. 4390 west 35th street • cleveland 9, ohio







COMMERCIAL





Simplified Open Expanse design

contributes to cleanliness...builds lasting good will

What keeps a rest room like this looking so new and spic and span over the years while other rest rooms become obsolete? Good planning. Planning for improved sanitation. Planning for attractive decor. Planning for lowest maintenance. Planning for construction economies.

You achieve all 4 of these desirable points when you use open expanse design. And the key to this is a fixture-free floor.

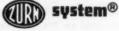
The pleasing effect of uncluttered spaciousness in this rest room was obtained by using American-Standard wall-type plumbing fixtures installed with and supported by Zurn System

behind-the-wall carrier fittings. This combination of superbly designed fixtures, and rigid supporting fittings especially engineered to relieve the wall of all the load, gives you an "age-proof" installation that insures against the untimely obsolescence of your rooms.

If you would like to know more about the advantages of American-Standard wall-type plumbing fixtures and the Zurn System, we would be pleased to send you two interesting booklets which contain up-to-date information on these essential products. Just ask for the American-Standard "Better Rest Room Guide" and the Zurn booklet, "You Can Build It For Less A New Way."

American-Standard

off-the-floor fixtures
installed with and supported by the



give you these important benefits-

- insured sanitation
- ✓ simplified maintenance
- modern appearance



American Radiator & Standard Sanitary Corporation, Pittsburgh, Pa.

J. A. Zurn Mfg. Co. (Plumbing Division), Erie, Pennsylvania

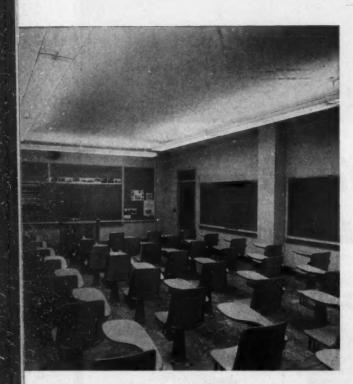
In the rolling hills





of North Carolina

Eye comfort is all important



The famous Day-Brite LUVEX "U" pattern for classrooms provides ample light on the desk tops and chalkboards and an emphasis of light on the teacher's desk.

Western Carolina College at Cullowhee installs Day-Brite LUVEX® fixtures in classrooms and departments, symmetrical strip in the library, big 4 by 4 units in the main reading room.

Six Associates, Inc., Architects of Asheville, designed these two recently completed science and library buildings... The famous Day-Brite LUVEX fixture was selected for classrooms and departments — mirrored surface reflector strips for book stacks — 4 by 4 units for the main reading room. How fully their choice was justified is shown in the interior views pictured on these pages.

Their comment on the installation is interesting.

"Please say that the owners and architects are pleased indeed with the lighting job that Day-Brite fixtures are doing at the College and that in the Library reading rooms, which are used a great deal at night, the lighting is such that seeing is effortless and at the same time the atmosphere is restful."

By installing LUVEX fixtures, full advantage was derived from the light-colored walls and ceilings—since LUVEX design combines 50% upward lighting with 50% downward lighting, ceiling gloom is "washed out." This results in adequate lighting PLUS all-important eye comfort.

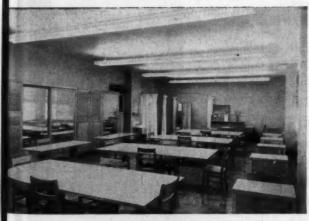
CALL OR WRITE YOUR NEAREST DAY-BRITE LIGHTING REPRESENTATIVE FOR

Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Missouri. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.

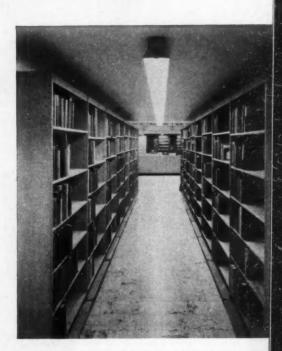


Large rooms such as this library reading room were, in the past, apt to suffer the discomforts of inadequate lighting. Not so with this one. Here, Day-Brite's big 4 by 4 units become integrated into this spectacular ceiling, and in addition, provide a minimum of 50 comfortable foot candles — enough light to read the smallest text with ease.

to Western Carolina College



Here, in the sewing lab and the home economics kitchen, LUVEX fixtures are mounted on eightinch stems across the width of the room. Comfort is not dependent upon the orientation of this fixture to the working area.



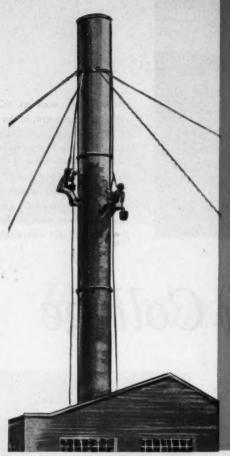
From the top to the bottom shelves in these stacks an ample 30 to 40 ft. candles allows swift and easy identification of any volume. A perfect application of Day-Brite's standard single-lamp STRIP units with symmetric polished alzak reflectors.

5424

INFORMATION ON ANY LIGHTING PROBLEM



Nation's Largest Manufacturer of Commercial and Industrial Lighting Equipment





Natural draft is costly. Steel stacks require periodic painting; still they rust and corrode and need repair and



WING DRAFT INDUCER SHOWING AXIAL FLOW FAN AND BAROMETRIC DAMPER (Optional)

replacement. Brick chimneys need periodic pointing. A Wing Inducer and an inexpensive stub stack to clear the roof, is all you need. And you get positive, adequate draft at all times, regardless of wind or weather. Write today for bulletin. Use the coupon.

L. J. Wing Mfg.Co. 151 Vreeland Mills Road, Linden, N.J.

Factories: Linden, N. J. & Montreal, Canada

TAT	
W	ınğ
	3
	(83)

L. J. Wing Mig. Co., Linden, N. J. Please send me bulletin on WING DRAFT INDUCE	RS.
Name.	
Firm	
Address	
City Zone State	







(Continued from page 270)

SHEET PLASTIC

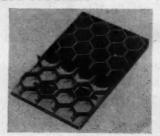
Cast acrylic sheet called Plexiglas R is lower in price than standard Plexiglas, depending on thickness and size. It has the same chemical and physical properties as standard Plexiglas and can be used for many of the same applications. Rohm & Haas Co., Washington Square, Philadelphia, Pa.

ELECTRIFIED STEEL FLOORING



Electrified cellular steel flooring combines Milcor Celluflor and Walker electrification. Milcor Celluflor is a steel subflooring which consists of hollow cellular panels made up of formed sections spotwelded together. The design of these structural panels provides longitudinal electrical raceways spaced on 6-in. centers. The raceways are electrified by a system of heater ducts and service fittings manufactured by Walker Bros., Conshohocken, Pa. The combined system gives any building complete electrical flexibility. Inland Steel Products Co., 4157 West Burnham St., Milwaukee 1, Wis.

SAFETY FLOORING



Hexteel safely floor armor can be used in new concrete floor installations or in conjunction with a mastic fill on existing concrete or new wood floors. It forms a continuous steel floor armor which is said to eliminate cracking, swelling, warping and shrinking and is designed to take the brunt of rolling loads. The exposed steel surface is 18.15 sq in. per sq ft of floor, and the weight of the Hexsteel is 1.7 psf. Klemp Metal Grating Corp., 6603 So. Melvina Ave., Chicago 38, Ill.

(Continued on page 278)

Modern way to create luxurious offices . . . economically

NEW FACTORY FINISHED

Craftwall

HARDWOOD PLYWOOD PANELING

Roppis factory-finished Craftwall offers many practical and economical design opportunities in creating modern interiors. And Craftwall is as applicable to modernization as to new construction.

Manufactured so it can be used vertically or horizontally, there is no limit to the decorative combinations you can develop with Craftwall. The various styles and sizes cut economically, too—can be installed quickly—and there is but little waste.

Roddis factory-finished Craftwall is as beautiful as it is practical. Offered in 9 handsome hardwoods and Knotty Pine, panels are factory-finished to bring out natural beauties of the wood—and to provide a durable, long-lasting finish that requires a minimum of maintenance. Roddiscraft hardwood moldings and trim can be finished to match the paneling.

Ask your Roddiscraft representative for Craftwall samples or send the coupon below for information.

Craftwall design suggestions .:. No. 3 of a series

Photograph is Walnut Craftwall, Style 100. This illustrates a design that solves the problem of ceilings in excess of standard height. Craftwall cut to short lengths completes the floor-to-ceiling paneling, and the joint is covered through use of a clever cove with indirect lighting.

Roddiscraft

RODDIS PLYWOOD CORPORATION . MARSHFIELD, WISCONSIN WAREHOUSES IN PRINCIPAL CITIES

RODDISCRAFT, RODDIS PLYWOOD CORP.
Dept. AR-555, Marshfield, Wis.

Gentlemen: I want to know more about factory-finished Craftwall.

Please send me illustrated literature and cost information.

Name

Address

CityState

FOR BETTER DESIGN, ECONOMY



1. SHADE SCREENING made with Kaiser Aluminum blocks hot sun rays—keeps interiors as much as 15° cooler. Reduces glare. Won't stain, corrode or rust. Improves exteriors by providing clean, uniform, handsome window lines.



2. STAIR RAILINGS made with Kaiser Aluminum provide bright modern accent. And aluminum's beauty lasts with minimum maintenance. Requires no painting. Light weight means easier installation, lower costs.



3. WEATHERSTRIPPING and thresholds made with Kaiser Aluminum give more economical protection against dirt, dust, weather. Non-corrosive, and won't rust. Aluminum weatherstripping retains spring tension after years of continuous use.



4. REVOLVING DOORS made with Kaiser Aluminum are light in weight, light in feeling. Clean and modern in appearance. Far easier to operate than old-style revolving doors. Can't rust or corrode.

AND BEAUTY...SPECIFY ALUMINUM



5. WINDOWS of any style made with Kaiser Aluminum give a bright, light look that lasts for years. Won't shrink, rattle, or leak. Never need paint. Never can mar exteriors with red rust streaks.



6. WALL PANELS prefabricated with Kaiser Aluminum are light in weight, easy to handle, economical to erect. Can be fabricated in various handsome exterior designs. Narrower wall section may be used—increasing interior floor area.

Architects and builders specify aluminum building products for commercial buildings to complement their designs, to lower the cost of construction, to provide modern beauty.

Almost any building product is better in aluminum because aluminum offers a combination of advantages no other material can match—including light weight with strength, corrosion resistance, long life, low maintenance, economy.

As a basic producer of aluminum our efforts are put behind the job of serving manufacturers

-to help improve their products and reduce costs.

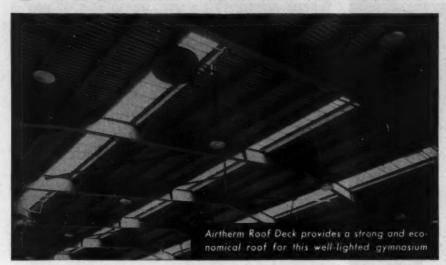
Engineering assistance is available from our qualified aluminum engineers. Or for names of building products manufacturers who will be glad to work with you, contact the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc. General Sales Office, Palmolive Bldg., Chicago 11, Illinois; Executive Office, Kaiser Bldg., Oakland 12, California.

Kaiser Aluminum

setting the pace-in growth, quality and service

Kaiser Aluminum helps build demand for aluminum building products like these through consistent, colorful advertising in national magazines like Saturday Evening Post and Time.

Airtherm ROOF DECK



designed for a wide range of applications

Airtherm Steel Deck Sheets are furnished in 30" widths (the widest in the industry) with five ribs spaced on 6" centers. These ribs, 15%" deep, have a bearing surface of 5%" and a top opening of only 34" wide. These wider, self-aligning sheets mean fewer longitudinal laps with resultant savings in construction time and costs.



In this church the attractive appearance of painted Airtherm Roof Deck adds functional beauty to the clean design

Airtherm Decking provides a strong, safe and durable steel roof in flat, pitched or arched construction. It has been proved in installations as side walls, partitions, canopies, and as a sub-base for concrete or aggregate flooring. This versatility, plus its attractive appearance, has led to many unique applications in a wide range of structures.

18-GAUGE	AIRTHERM	ROOF	DECK	

Section	Mo	dulus	(in) 3	
Moment	of	Inert	ia (in.)	4
Resisting	M	omen	e (in	a lb	1.21

PROPERTIES

.220

.263

To care for all contingencies relative to geographical areas and various purlin spacing, Airtherm Decking is also manufactured in No. 22 Gauge and No. 20 Gauge metal thicknesses.





For more complete information consult our catalog in Sweet's 2dAi, or write...

MANUFACTURING COMPANY

747 South Spring Avenue St. Louis 10. Missouri

Member: Metal Roof Dock Technical Institute

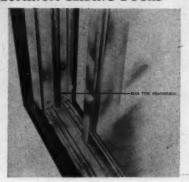
A PRODUCTS

(Continued from page 274)

WATER COOLING

A single-stage turbo water-cooling system uses a new design approach utilizing a single-stage, cast-aluminum impeller wheel. This design is said to produce high efficiency compression, rugged construction with minimum weight and bulk, simplification of mechanical details, simplified and improved lubricating system, minimum of gasketed joints, ease of servicing and suitability for automatic operation. York Corp., York, Pa.

ALUMINUM SLIDING DOORS



Aluminum sliding glass doors that have a two-piece sill allow installation of a sub-sill before laying of the finished floor. The sill track is installed after all work is completed, so that there is no damage to the track. Bulb-type weather-seal is used in the jamb frame, and double pile-type in the bottom rail. Ludman Corp., North Miami, Fla.

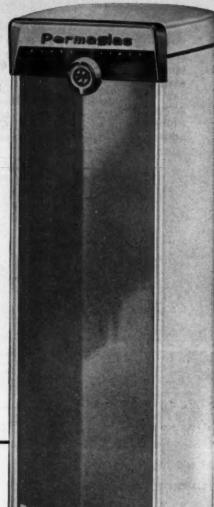
WINDOWS AND DOORS



Three new products displayed at the annual exhibit of the Northeastern Retail Lumbermen's Assoc. in New York are shown above. The Econovent (left) is an awning window designed to give more flexibility in fenestration without extra cost. The E-Z Hung door (center) is a combination self-storing screen and storm door. The Woodco sliding window (right) also has interchangeable screens and glass panels. General Woodcraft Co., Inc., North Bergen, N. J.

(Continued on page 280)





now...the water heater that revolutionized an industry does it again...

Permaglas

America's leading glass-lined water heater!



PERMAGLAS DIVISION . KANKAKEE, ILLINOIS

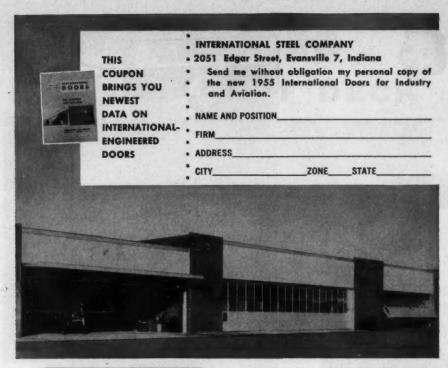
Now... America's first stylized water heater—in color.

Plus . . . America's first "Eye-Hi" temperature control.

Plus...famous exclusive HEETWALL design—and higher inputs.

And . . . the *only* glass-lined tank proved by over 2,500,000 families.

All this in the most accepted, most popular, glass-lined water heater in the industry!



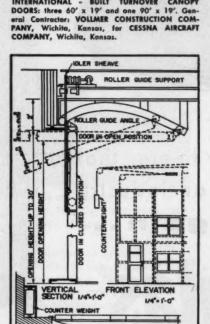


newest addition to the famous names served by

INTERNATIONAL HANGAR DOORS

International installations at Cessna mark the newest such entrance completed for a major aircraft manufacturer . . . ranging in size up to the world's largest.

For Cessna the problem was similar to that for other manufacturers supplied by International—building a door that would provide a tight closure; operate easily in all weather; and could be produced economically. International's experience with every type of aviation door resulted in Cessna selecting those illustrated. The growing list of leading names served by International Doors, in aviation and in all industries, merits your consideration when planning a structure demanding doors engineered to provide the most efficient entrance . . . most economically. See Sweet's Architectural File.



The above detailed drawing of a typical International Turnover Canopy Door illustrates its special suitability for small to medium openings — where floor space and interior clearance are limited. Door rises vertically, then swings out and up, with approximately 50% of door height projecting outside as a canopy. Offers extra protection against bad weather. Always clear of usable floor space in opening or closing.

UP TO 150'

TOP SECTION IM"-1'-0"



2051 EDGAR ST. • EVANSVILLE 7, INDIANA

INTERNATIONAL STEEL COMPANY

A 13 PRODUCTS

(Continued from page 278)

CHALKBOARD

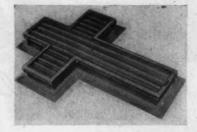
A classroom chalkboard which is claimed to be easier to install, write on and erase from is called the Benjamin Porcenell Chalkboard. Its surface is an inert, vitreous finish which will not fade or discolor with age. Porcenell, being moisture-proof and non-absorbent, will not loosen or become mildewed due to excessive use of water. Benjamin Electric Mfg. Co., Porcenell Chalkboard Div., Des Plaines, Ill.

COMBINATION DISPLAY BOARDS



A combination display board, chalkboard and corkboard, framed in aluminum and ready to hang on the wall from concealed hangers, is recommended for office, conference room, schoolroom, sales room, laboratory or shop. The Modular-4 Multi-Units have an "Easy-Tilt" device which permits the bottom of the unit to be adjusted outward 11 in. from the wall. The corkboard can be used as an easel. The display board has holes drilled on 1-in. centers to receive a variety of hooks and hangers. Weber Costello Co., Chicago Heights, Ill.

SKYLIGHTS



Two new Marcolite skylights are produced in a cross design (shown above) and an octagonal shape. Both have self-contained curb and roof flanges, thus eliminating the need for curb construction and curb flashing. Corrugated, translucent, structural, plastic panels diffuse all light and filter out a majority of ultraviolet and infrared rays. The Marco Co., 45 Greenwood Ave., East Orange, N. J.

(Continued on page 284)

No Lunch Served

One look and it is obvious that this is a financial institution. Yet the same Formica that has been so effectively used here for all "heavy traffic" surfaces is hard at work in the colorful lunch counter on the corner, the

hotel down the street, the hospital, school, and thousands of homes.

Formica brings long-lasting beauty with low maintenance to surfaces in nearly any surroundings. In the Formica Sunrise Line, styled by Raymond Loewy, are the high style colors and dignified wood grains to fit any fashion.

See Sweets $\frac{13 \text{ a}}{\text{FO}}$ or write for copy of new architectural catalog.

FORMICA 4632 Spring Grove Ave., Cin. 32, Ohio

In Canada: Arnold Banfield & Co. Ltd. Oakville, Ontario.

DEMAND THIS CERTIFICATION

es mark genuine

Southwestern Savings & Loan Assn., Houston, Texas Zimmerman and Bible, Architects Storecrafters, Formica Fabricator

Seeing is believing. If this wash-off identification is not on the surface, it's not FORMICA.





FLEXIBILITY of arrangement: side by side, one over the other, on opposite walls. Each has compressor and condenser in one unit for easy, nearby installation.

Betty Furness says:

"These built-in appliances reflect the accent on modern living...their beauty, convenience and compactness insure the homeowner's satisfaction."



Design kitchens with greater freedom! New Westinghouse Built-in Refrigerator and Freezer

No longer need you be restrained by conventional refrigerator and freezer requirements when you design contemporary kitchens. These handsome, new built-in appliances offer wide flexibility of arrangement; a high degree of space organization; and well-integrated storage of all foods, fresh and frozen. Available in Brushed Chrome, Sunshine Yellow, Cascade Aqua or Gleaming White, this built-in pair will keynote the trend to modern living.

The 8.3 cu. ft. Westinghouse Built-in

Refrigerator, Model BRH-80, has automatic defrosting, adjustable shelves, door shelves and a giant double-door crisper. The companion 6.3 cu. ft. Freezer, Model BFH-60, has a roll-out drawer for odd-shaped frozen packages and a 220-lb. frozen storage capacity.

For complete details, contact your distributor or write direct.

WESTINGHOUSE ELECTRIC CORPORATION
Electric Appliance Division • Mansfield, Ohio

YOU CAN BE SURE ... IF IT'S Westinghouse



RAIN OUT

SASH
ADJUSTABLE
FOR
INDIRECT
SCREENED
VENTILATION

Theetlites

All-sash removable from the inside for easy cleaning.
Made of heavy extruded aluminum. Complete with
window frame. Factory glazed. No Maintenance.
Nothing to store. Never needs painting or puttying.
Write for information.

Chart of Standard Window Sizes
☐ Typical Installation Details ☐ Location of Fleetlite Installation in my area ☐ Quotation on Windows for Attached Plans.
Gentlemen: Please rush the material checked above.
Name
Addense

Address

FLEET OF AMERICA, INC., 506 New Walden Ave., Buffalo 25, N. Y.

A I PRO

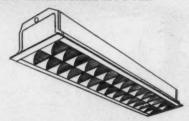
PRODUCTS

(Continued from page 280)

DESK PUSHBUTTONS

New desk pushbutton selectors, in one-, two-, four- and six-button models, are magnified and have 42 printed designations to save problems of lettering, printing or typing. The case is molded of high-impact styrene and the finish is lustrous gray. Edwards Co., Norwalk, Conn.

LOW-BRIGHTNESS LOUVER



A low-brightness louver for use with Lite-Blox recessed troffers has a high "visual comfort index" because of parabolic design and new precision-rolled cross baffles designed for excellent diffusion and low brightness. It is made of #1 reflector aluminum and finished with Alzak. The center V and cross baffle canbe removed by pressing the hold locks. The assembly is supported on chains for relamping. The Edwin F. Guth Co., 2615 Washington Blvd., St. Louis, Mo.

RECESSED LIGHTING



A recessed incandescent lighting fixture, available in square and rectangular styles, is prewired and comes with a variety of lenses and a broad range of sizes, from 60 to 300 watts. The reflector is fabricated from a single piece of aluminum chemically brightened to obtain maximum light output. Litecraft Mfg. Corp., 8 East 36th St., New York 16, N. Y.

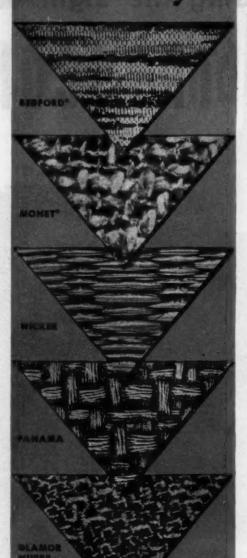
COOLING TOWER

A cooling tower claimed to be an ideal outdoor water saver has a wetted deck of redwood and corrosion-resistant parts. It has a low silhouette and a natural green color that requires no painting. The fan is driven by a low pumping head water turbine which eliminates outdoor electrical connections. Kennard Corp., 1819 So. Hanley Rd., St. Louis 17, Mo.

beautiful and practical for any interior TEXTURED



Masland Duran





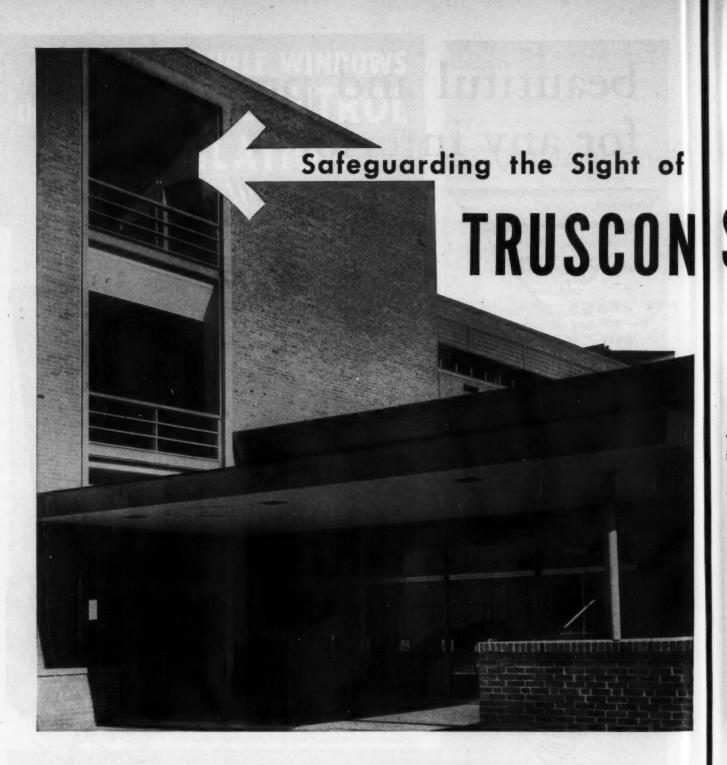
Give the finishing touch of good taste and convenience to that home or commercial establishment you are planning. You can with Masland Duran. Colors and patterns for unusual beauty on chairs, booths, stools... and all types of furniture. Clients will like its scuff-resistance, durability and the quick, easy way it can be kept clean by occasional wiping. Many luxurious new patterns, including textured effects. Write for samples.

The Masland Duraleather Co., Dept. 36, Phila. 34, Pa.

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ONLY MASLAND MAKES DURAN

Masland Duran



Always Specify Truscon-Engineered Building Products — Including:



Truscon "O-T" Steel Joists for floor and roof supports. They are light, strong, and fire-resistant. Easy to handle, they lessen the time and labor required for erection, save material in supporting framework and foundations.

Truscon Metal Lath for better, faster plastering. Accepted by all building codes . . . easy to erect, easy to form, easy to work over. Special accessories to meet every plastering requirement.



Tomorrow's Physicists

Steel Windows

in University of Pennsylvania Physics Lab, Philadelphia, Pa.

In corridors and classrooms, a variety of Truscon Steel Windows provides an abundance of natural illumination in the new University of Pennsylvania Physics Lab.

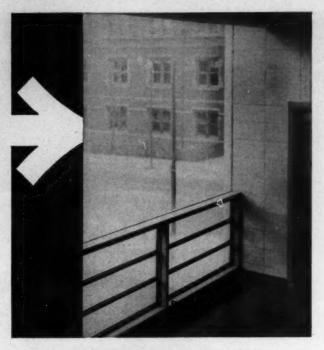
Functional in design, handsome in appearance, and economical to maintain, Truscon Steel Windows are especially adaptable to modern school requirements. Rigid, heavy frame sections insure long, satisfactory service. Solid bronze hardware will not rust or corrode. And you can choose from an almost endless variety of sizes and types, when you specify Truscon-the foremost line of metal windows available anywhere.

Many designs have combined varieties of Truscon Steel Windows to achieve beautiful as well as functional architectural effects. The Truscon line includes casement and awning windows in both steel and aluminum, picture, double-hung, ranch, basement, Donovan, detention, and an unexcelled choice of variations.

Send the coupon for your copy of the complete Truscon Window Catalog for your files. In a hurry? You'll find details, sections, and sizes in Sweet's.



World's Widest Range of Standard Steels and Steel Products



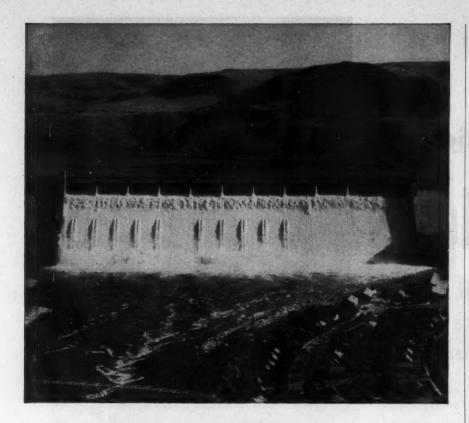


UNIVERSITY OF PENNSYLVANIA PHYSICS LAB., Philadelphia, Pa. ARCHITECTS: Jas. R. Edmonds, Jr., Baltimore, Md. and Willing, Sims & Talbutt, Philadelphia, Pa.

GENERAL CONTRACTOR: The Baton Construction Corp.

TRUSCON WINDOWS USED: Donovan, Architectural Projected, Commercial Projected, and Maxim-Air Steel Windows.

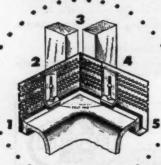
TRUSCON STEEL DIVISION, REPUBLIC STEEL 3110 Albert Street Youngstown 1, Ohlo	REPUBLIC STEEL
Please send me more details on: Truscon Metal Windows Truscon "O-T" Steel Joists	☐ Truscon Metal Lath
Name	_Title
Company	
Address	



It's Never "Water Over the Dam"

Leakproof TUB HANGERS

Quality can be built into every bathroom when the vital spots around a tub are permanently leakproofed with LUCKE Tub Hangers. You can always rest assured of complete customer satisfaction with this easy solution to a sometimes extremely bothersome problem. Check the advantages . . . the cost is so little for so much. All the new Statler Hotel bathtub installations are being safeguarded with LUCKE Leakproof Tub Hangers:



- 1. Seals rim permanently against water seepage.
- Tub is easily levelled with Lucke Tub
- Equal support on all studs ... eliminates strains . . . prevents sagging.
- Perforations on upper part of hanger form base for wall material.
- No unsightly cracks accur at the rim to harbor dirt, grease and germs.

Excellent for masonry and all types of wall construction.









Write for complete information.

AM B. LUCKE, INC. WILMETTE, ILLINOIS

LITERATURE

(Continued from page 228)

DIRECTIONAL SIGNS

• Directional Signs is a 15-page booklet containing illustrations and specifications of interior illuminated directional signs for banks, hotels and other large buildings. Price Bros. Inc., 4301-4305 W. Madison St., Chicago 24, Ill.*

CEMENT

- Information on the uses, applications and specifications of portland cements, waterproofings and tile grout cement is contained in a 25-page catalog. Medusa Portland Cement Co., 1000 Midland Bldg., Cleveland 15, Ohio.*
- · An eight-page illustrated folder on Embeco Pre-Mixed grout and a 4-page illustrated folder on Embeco Pre-Mixed mortar give complete directions for their use, as well as describing their characteristics. The Master Builders Co., 7016 Euclid Ave., Cleveland 3, Ohio.*
- Toplighted Roofs presents information on Vanco stage ventilating skylights and the following Vanco Plexiglas skylights: Domelite, Domelite and Ceiling-Lite combination and Dome-Air. 12 pp. illus. E. Van Noorden Co., 100 Magazine St., Boston 12, Mass.*

SKYLIGHTS AND VENTILATORS

· Daylighting with Wascolite contains specifications, detail drawings and photos of a complete line of daylighting products. 12 pp, Wasco Products, Inc., 93P Fawcett St., Cambridge 38, Mass.*

MAIL CHUTES

· Specifications, photographs and detail drawings of mail chutes are given in a 4-page folder from Cutler Mail Chute Co., 76 Anderson Ave., Rochester 7, N. Y.*

HEATING SYSTEMS

- · A complete line of equipment for forced hot water heating systems and chilled water cooling systems is described in a 24-page, illustrated catalog. Bell & Gossett Co., Morton Grove, Ill.*
- · A 32-page handbook on electric heating contains information on designing, cost estimating and installing electric heating systems. It includes a review of heating fundamentals and charts for determining heating capacities of specific spaces. Booklet B-3768-B. Westinghouse Electric Corp., P. O. Box 2278, Pittsburgh 30, Pa.

(Continued on page 292)

Whatever a Plant Door Must Do...



reduce noise

save heat



withstand pressure

speed handling





resist humidity

isolate gas



JAMISON Will Build It

When a door must do more than merely open and close, the effective and trouble-saving solution is a Jamison Engineered Door. It's the answer to many different problems: sound reduction, temperature, pressure, humidity, materials handling, gas isolation, corrosion, impact, visibility, safety or security. Or maybe you need a door that's unusual in size, shape, or the way it opens. Whatever the problem, Jamison brings to it more than 50 years of experience in developing cold storage and special-purpose doors. Send the coupon now for specific information.



ENGINEERED DOOR DIVISION

JAMISON Cold Storage DOOR COMPANY

HAGERSTOWN, MD., U.S.A.

Without obligation, I'd like your recommendations on a door that must

Name

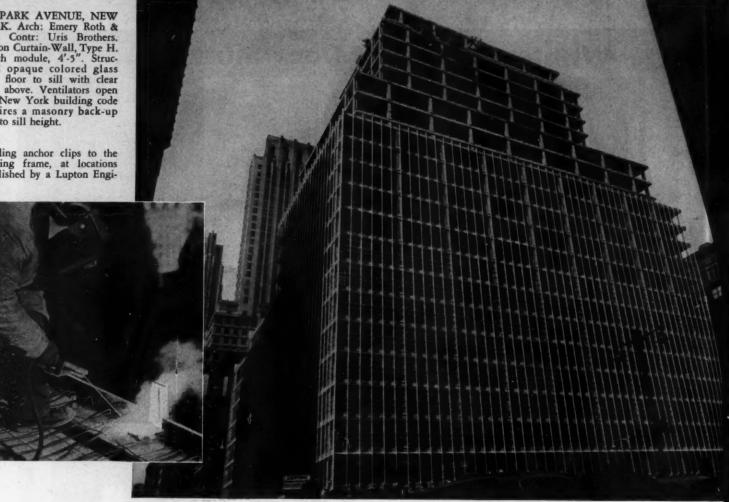
Title

Company

Address

300 PARK AVENUE, NEW YORK. Arch: Emery Roth & Sons. Contr: Uris Brothers. Sons. Contr: Uris Brothers, Lupton Curtain-Wall, Type H. Width module, 4'-5". Struc-tural opaque colored glass from floor to sill with clear glass above. Ventilators open out. New York building code requires a masonry back-up wall to sill height.

Welding anchor clips to the building frame, at locations established by a Lupton Engi-



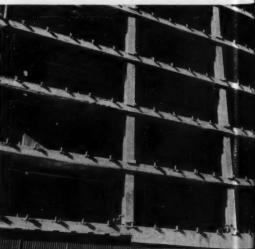
New Lupton Simplified Curtain-Wall System

Lupton-Engineered. Lupton-Made . . . Lupton-Installed

NEW JERSEY STATE TEACHERS' COLLEGE, MONTCLAIR, N. J. (2 bldgs.) Arch: Emil Schmidlin. Contr: Martin Infante Co., Inc., Lodi, N. J. Lupton Curtain-Wall System, Type H. Width modules 3'-9" & 4'-1". Fixed glass and projected-in ventilators. Opaque areas are ½" thick embossed, fluted aluminum, alumilited. Special features: Heavy aluminum subframes and door frames.

clips in position. Clips provide for horizontal and vertical alignment of the curtain-wall units.





Exterior view of building frame showing anchor

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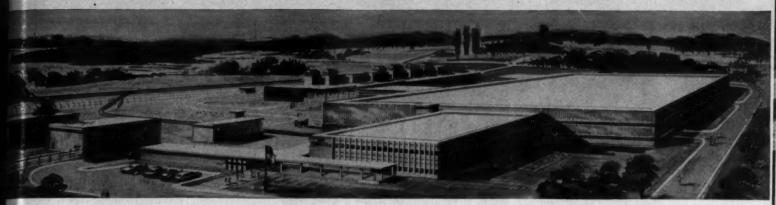
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IRCHILD ENGINE & AIRCRAFT COMPANY, DEER PARK, LONG BLAND, N. Y. (3 bldgs.) The Austin Company, Designers and Builders. Lupton Curtain-Wall System, Type H in office building. Width module

5'-0". Fixed glass, no ventilators. Opaque areas are ½" embossed fluted aluminum sheet with 1" thick insulation and galvanized steel sheet on inside. Lupton steel industrial windows in factory.

Tere's the curtain-wall you design - Lupton Manufactures — Lupton Installs

This new exterior wall system offers new flexibility of design, aesthetic appeal and decided economies.

The Lupton Curtain-Wall System uses prefabricated units and aluminum mullions, designed for varying conditions and wind loads. Completely adaptable to single-story and multi-story buildings.

The Lupton Curtain-Wall System has been engineered to overcome inherent problems in curtain-wall construction — condensation — expansion and contraction — corrosion — warping and buckling.

Through standardized factory operations the Lupton System of construction offers custom-designed units at reduced costs. The design elements and construction features incorporate Lupton's more than 40 years experience in the production of metal windows. Now, you can specify type of fenestration, choice of wall unit materials, texture and color — and get what you specify. Your problems are simplified because Lupton Curtain-Walls are manufactured, shipped and installed by one responsible organization.

A COMPLETE SYSTEM

Lupton installation includes everything-anchor clips adjustable to assure accurate alignment—all aluminum framework — custom-built units with or without ventilating sections — thorough, complete inspection and checking every step of the way.

INSTALLATION ECONOMIES

All-season installation from within the building maximum prefabrication, less to do on the site simplified on-the-job storage at needed floor levels . . . no ground storage. All aluminum units handle easily, go into place quickly.

For data sheets and Lupton help in your planning, write or wire . . .

MICHAEL FLYNN MANUFACTURING CO.

MAIN OFFICE AND PLANT: 700 E. Godfrey Ave., Phila. 24, Pa.

NEW YORK — 51 E. 42nd St., New York 17, N. Y.

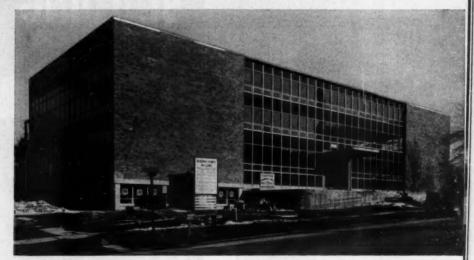
LOS ANGELES — 672 S. Lafayette Park Place, Los Angeles 57, Cal.

STOCKTON — 1441 Fremont St., Stockton, Cal.

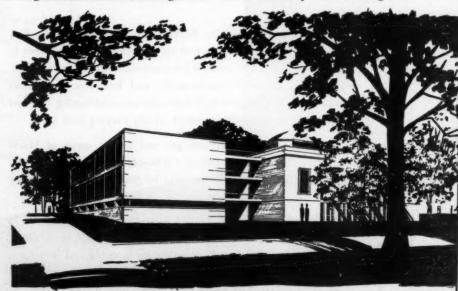
KANSAS CITY

(Herb W. George) 9209 Cherry St., Kansas City 5, Mo.

CINCINNATI — De Sales Bldg., 1620 Madison Rd., Cincinnati 6, O.



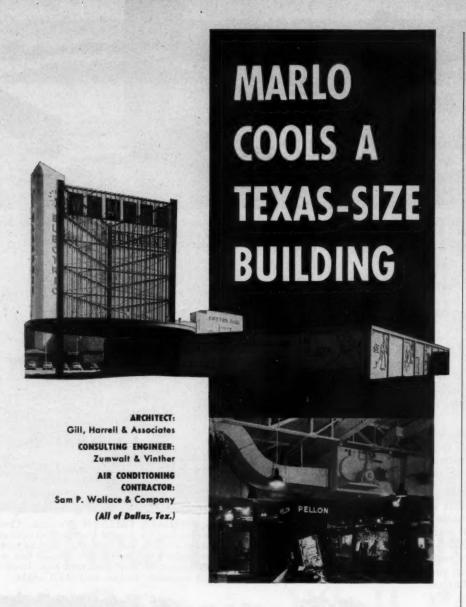
NIAGARA COUNTY BUILDING, NIAGARA FALLS, N. Y. Arch: Charles F. Obenhack. Contr: Walter S. Johnson Building Co. Lupton Curtain-Wall System, Type G. Width module, 4'-0". Double glazing, 1" thick fixed lights, ½" thick in ventilators. Ventilators open in. Opaque areas are double panel construction. Outside face is greenblack porcelain enamel laminated with honeycomb core, galvanized back. Inside face is galvanized steel sheet covering 1" thick insulation. Back-up wall to sill height.



SCHOOL OF DESIGN, NORTH CAROLINA STATE COLLEGE, RALEIGH, N. C. Arch: F. Carter Williams. Contr: Dickerson, Inc. Lupton Curtain-Wall System, Type H. Width module, 5'.8". Fixed glass and ventilators are inside bead glazed. Ventilators open out. Spandrels and column faces are covered by aluminum sheet .102" thick, alumilited.

LUPTON

Metal Windows and Curtain-Walls



The Women's Activities Building on the Texas State Fair Grounds, Dallas, is the largest air conditioned banquet area in the Southwest. The scene of international displays at Fair time, and of innumerable conventions and banquets throughout the year, this massive hall demands air conditioning of great capacity and flexibility to offset widely varying heat loads.

These cooling requirements are met with a series of Marlo Ceiling Type Air Handling Units—compactly designed and unobtrusively installed to provide the greatest cooling efficiency in the least amount of space.

The complete line of Marlo quality equipment provides a practical answer to any air conditioning problem, large or small. Write to Marlo today for complete information and literature.

SEE OUR BULLETIN IN SWEET'S CATALOG



A 13 LITERATURE

(Continued from page 288)

KITCHENS

- A 20-page brochure presents kitchen layouts and gives suggestions for color coordinating accessories. 25¢. Capitol Kitchens, Newark, N. J.
- Appliances for your Electrical Home contains 24 pages of illustrations, descriptions and specifications of home appliances including water heaters, laundry equipment, air conditioners and kitchen equipment.
- A 24-page brochure offers descriptions and illustrations of kitchen storage cabinets and accessories. General Electric Co., Louisville, Ky.*

SPACE SAVERS

- The use of *Unitfold* and *Unitslide* folding walls to create flexible room space is covered in a 4-page, illustrated folder from *John T. Fairhurst Co., Inc., 45 West 45th St., New York 36, N. Y.**
- •Multi-purpose foldaway equipment, including band stands, bleachers, stages, tables and benches, is described in a 4-page illustrated brochure. Haldeman-Homme Mfg. Co., 2580 University Ave., St. Paul 14, Minn.*
- A detailed description of movable metal walls is provided in a 68-page catalog illustrated with sectional drawings and photographs. The Mills Co., 965 Wayside Rd., Cleveland 10, Ohio.*

INCINERATION PLANTS

Incineration plants for cities is the subject of a 24-page brochure which offers descriptive data, photographs and engineering drawings. Pittsburgh-Des Moines Steel Co., Neville Island, Pittsburgh 25, Pa.

CONSTRUCTION SYSTEMS

Systems of Lightweight Construction outlines uses, installation procedures and specifications of vermiculite products and includes a summary of fire tests and ratings. Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.

SUSPENDED CEILINGS

Specifications for suspended ceilings of metal lath and plaster are available in a 4-page illustrated folder. Metal Lath Mfrs. Assoc., Engineers Bldg., Cleveland 14, Ohio.*

(Continued on page 296)

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issue of Architectural Record
carries the largest volume of
advertising ever published by an
architectural magazine 281 pages

Why? Unprecedented sales opportunities in the architectand engineer-designed building market of course, but equally important—

increasing recognition by building product advertisers that one magazine, Architectural Record, gives them thrifty, VERIFIABLE coverage of those architects and engineers who plan...

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... 73% of all architect-designed residential building

BUILDING TYPES STUDY

221

Through its many years of extensive research SEALUXE engineering takes long strides forward in creating eight new products and a

STARTLING NEW

aluminum grid and window frame become one

the BROWNE Bi-Folding Facade

(Model 11 Series 200)

something new under the sun!

- COMBINES FACADE GRID WITH WINDOW FRAME. Eliminates window frame which is now a part of the grid.
- AFFORDS A WATER BAR AROUND ENTIRE PERIMETER OF WINDOW.
- AFFORDS A CONVENTIONAL REVEAL.
- ELIMINATES CAULKING.
- COMPLETE aluminum grid, no steel.
- Tested at 30 pounds per square inch under hydraulic pressure.
- · Eliminates all screws.
- Opens for inside cleaning and/or controllable draft-free ventilation.
- Equipped with special air conditioning locks . . . manual or mechanical operation.
- Accommodates single or double glazing with removable glazing beads. It may be table glazed. Replacements can be made by building maintenance department without disturbing occupants.
- Custom made in any size. Maximum width of 10' 0".

Available in aluminum, bronze or stainless steel

Watch

for these new products.

Available soon



SERIES 100, Model 60 (operates to inside) SERIES 100, Model 61 (operates to outside) SERIES 300, Model 43-A

Sealuxe Engineering

has created a Manual of Techniques and a Dictionary of Devices for metal glass facading. Write for TECHNICAL & PICTORIAL DATA.

NATIONWIDE

FIELD

SFRVICES

Universal Corporation

"Miracles in Metals"

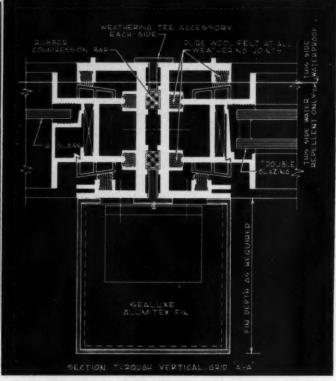
J. P. TRAVIS, President

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CONCEPT IN FACADES

heavier, better, improved facades at lower cost!





BROWNE Bi-Folding Facade

(Model 11 Series 200)

other SEALUXE ENGINEERED products:

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Folding Flue
Psychiatric
Underwriter's Labeled
Thermo-Vista Model 51-A
Ventilating Picture Window
Model 42-A
Uni-Core Panels

Uni-Fins (Rectangular and Polygonal) Cellular Spandrels and Fascias Dormer Surrounds Horizontal Solar Shades Vertical Weather Controls Solar Canopies (Eyebrows) Display Frames

IMPORTANT NOTE! UNIVERSAL, the leader for over 30 years, continues to set the pace in window and metal glass facading. There are no better materials available than non-ferrous metals and glass, if used properly.

INCLUDING ERECTION ON ALL PRODUCTS

"Miracles in Metals"

Universal Corporation PAT. PEND.

- Engineering
- Manufacturing
- Installation



J. P. TRAVIS, President

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Luxury of Built-in Showers Plus Enduring QUALITY ...at LESS COST!



"In-a-Wall" Weisway Cabinet Showers provide the luxurious effect of built-in construction at a cost which makes them practical for homes in almost every price class. Weisways are complete, self-contained units—entirely independent of the building structure—not affected by shrinkage of surrounding materials.

Precision-built, of service-tested materials, Weisways are guaranteed leakproof, provide long years of dependable service. Vitreous porcelain enamel on one-piece receptor or heavy guage iron. Foot-Grip, No-Slip floor is equally safe, wet or dry; easy to keep clean and sanitary. No lead pans required, no special treatment of building walls or floor.

Write now for catalog showing complete Weisway line with detailed specifications.

Weisway CABINET SHOWERS

HENRY WEIS MFG. CO., INC., 503 Weisway Bldg., Elkhart, Indiana

AE

LITERATURE

(Continued from page 292)

ENTRANCES, REVOLVING DOORS

Crane aluminum entrances, window walls, doors, revolving doors and hardware are detailed in a 12-page illustrated brochure. Crane Fullview Glass Door Co., 4500-10 No. Clark St., Chicago 40, Ill.

SILENCER

A 20-page booklet describes Aircoustat units for silencing air conditioning systems. Included are complete specifications and an outline of how to solve air conditioning noise problems. Industrial Sound Control, Inc., 45 Granby St., Hartford, Conn.

LIGHTING

- RLM Standard Specifications covers 47 different types of incandescent and fluorescent industrial lighting units. RLM Standards Institute, Suite 818, 326 W. Madison St., Chicago 6, Ill.
- A 20-page Booklet B-4556-B gives the basic requirements for school lighting systems. It discusses both new installations and relighting projects and includes several lighting layouts. Westinghouse Electric Corp., P.O. Box 2099, Pittsburgh 30, Pa.

WINDOWS

- Wood window units are explained in detail with section drawings and photographs in a 22-page catalog available from the Andersen Corp., Bayport, Minn.*
- Auto-lok windows with torque bar operation are described and illustrated in a 4-page folder. Ludman Corp., 14100 Biscayne Blvd., No. Miami, Fla.*
- Insulating windows and screens are discussed in a 4-page folder issued by the Small Homes Council, University of Illinois, Urbana, Ill.

GLASS BLOCKS

- A 4-page folder describes Owens-Illinois No. 80-F glass block designed for southern exposures, and includes a light prediction chart. Kimble Glass Co., Toledo 1, Ohio.
- An 8-page booklet shows in detail the performance of Suntrol glass block. Piltsburgh Corning Corp., 1 Gateway Ctr., Piltsburgh 22, Pa.*



RUST-OLEUM

STOPS RUST!

See local classified telephone directory under Rust Preventives or Paints for nearest Rust-Oleum Industrial Distributor. applied over your own rusted metal after simple scraping and wire-brushing to remove rust scale and loose rust. Rust-Oleum's specially-processed fish oil vehicle penetrates rust to bare metal—saving time, labor and money.

Rust-Oleum finish coatings in Aluminum, Gray,

Rust-Oleum finish coatings in Aluminum, Gray, White, Black, Orange, Blue, Yellow, Green and others provide both Rust Prevention and Decorative Beauty! Specify Rust-Oleum for new construction, maintenance and re-modeling. See

Sweet's for catalog and nearest Rust-Oleum Industrial Distributor, or clip coupon to your letterhead...

There is Only One Rust-Oleum. It is as Distinctive as Your Own Fingerprint.

ATTACH TO YOUR BUSINESS LETTERHEAD AND MAIL TO:

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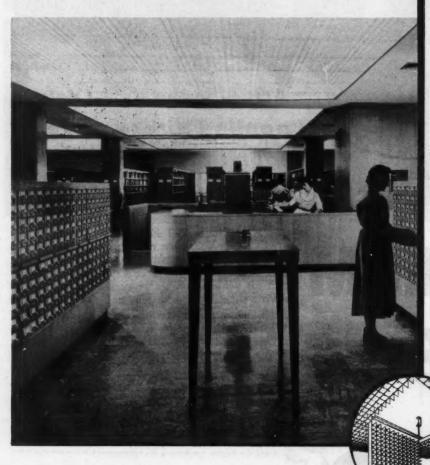
- Please Show Me the Rust-Oleum "Rusted Panel Demonstra-
- Complete Literature with Color Chart.
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Modern Lighting for a Modern Library

NEO-RAY LOUVRED CEILING

with Factory Prefabricated Alignment

Pat. No. 2,689,026



El Paso Public Library—El Paso, Texas

Architect: Carroll & Daeuble

Contractor: Robert E. McKee



And when it comes to lighting, the specs called for NEO-RAY CU Louvred Ceilings with 3" x 3" x 3" cells . . . hinged sections, continuous unbroken louver pattern in all directions. It blends perfectly with the modern surroundings . . . and provides correct, comfortable lighting so necessary in a library.

"... the new library had to be not only a fine functional building, but also genuinely expressive of El Paso and the Southwest." Utility plus beauty to create a structure of maximum efficiency.

Perhaps Neo-Ray LOUVRED CEIL-INGS can fit into your plans. Our engineering staff is ready to assist in the creation and development of any special louvred ceiling designs.

See our catalog in Sweet's Architectural File sec. 30a

Send for NEW LOUVRED CEILING catalog No. 544

MANUFACTURERS OF LIGHTING FIXTURES INCLUDING:









Coilings • Roto-Strip • Luminette • Kleen-VU KVT Tra

NEO-RAY PRODUCTS, Inc. 315 East 22nd St. • New York 10, N. Y.

Vina Lux...showcase floor for smart shops



Toy Shop · Neiman-Marcus · Dallas

Sales wise merchants know the importance of proper merchandising sur-

roundings. No part of the store "backdrops" goods for sale more than the floor.

So naturally, retailers are turning to Vina-Lux vinyl-asbestos tile as a basic "selling floor surface". Its balanced range of colors with superior light reflectance — its cushioned resiliency underfoot — and its smooth easy-to-clean surface all combine to make it a logical choice.

America's leading stores, in increasing number, are choosing Vina-Lux to help sell goods—and to keep

floor costs down. Architects are finding it the answer not only to store floor problems, but for schools, hospitals and other kinds of public buildings.

Perhaps Vina-Lux can help you solve a knotty floor problem. Drop us a line and we'll be glad to have a representative give you the whole story on this better resilient flooring.

Pina-Lux
REINFORCED & VINYL TILE

AZROCK PRODUCTS DIVISION • UVALDE ROCK ASPHALT CO.

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MAKERS OF VINA-LUX • AZROCK • DURACO • AZPHLEX.

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AETNAWALL





Dust can ruin valuable instruments. Usual clean AETNAWALL installation assured trouble-free operation, even during drilling.







Magnified view of perforations for sound absorption.

The housing of this sensitive electronic equipment presented a three-way problem-sound control, dust control and speed of installation.

AETNAWALL was the obvious answer!

Wherever quality production, experienced engineering ability, faithful follow-through and prompt delivery are essential, American industry, as it has for over a quarter of a century, specifies AETNAWALL.

The best in pre-fabricated movable walls for all uses . . . Product of

ABTNA STEEL PRODUCTS CORPORATION

J. BOYLE DIVISION 14 Charlton Street, New York 14, New York



How can you be sure of fir plywood quality?

LOOK FOR THE DFPA TRADEMARK!

Play it safe! Your reputation is on the line with every panel you buy, sell or specify. Insist on genuine DFPA trademarked panels. DFPA grade-trademarks are hallmarks of quality used only on plywood manufactured under the industry's rigid quality control program. These marks are your very best assurance of reliable quality.

*DFPA—Douglas Fir Plywood Association, Tacoma, Washington, is a non-profit industry organization devoted to product research, promotion and quality maintenance.



PlyPanel® for Interior finish



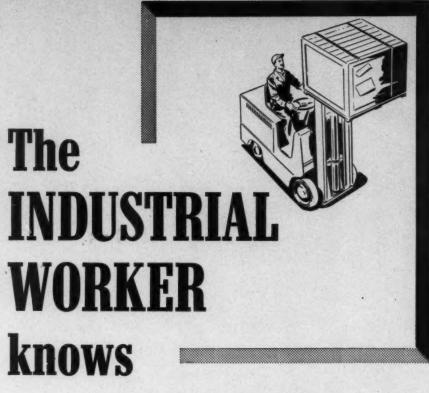
PlyScord® for structural uses

EXT-DFPA

EXT-DFPA for outdoor uses

... other grades for other uses.

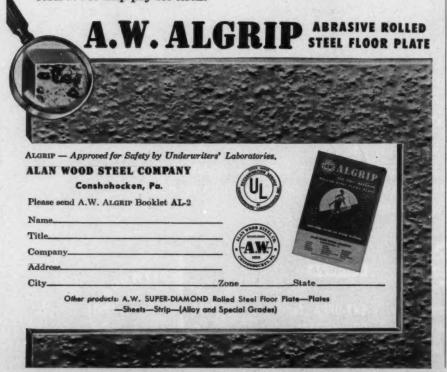




—and he knows at close range—that an accident means serious personal tragedy to the worker as well as financial and production problems to the plant.

It's a fortunate worker who is employed by one of the progressive firms which have taken the practical step that assures safety against slipping accidents... by installing ALGRIP... the world's only Abrasive Rolled Steel Floor Plate. Oily, wet or greasy—level or on slope—the ALGRIP floor is foot-safe for the worker... safe against skidding for material-handling equipment... because ALGRIP's uniformly and deeply embedded abrasive keeps it safe... year in, year out.

ALGRIP maintains itself...cuts accidents...and insurance costs...to help pay for itself.



QUOTES FROM PARTICIPANTS

(Continued from page 157)

outdoors are merging.... The tendency is toward the free flow of space to achieve the illusion of more space than exists. Living rooms, dining rooms, entry halls, stair halls, play areas, even kitchens (in servantless households) are becoming subdivisions of the major living area. Fortunately, the bedrooms are still private."

— William W. Landsberg

"Architects should think a little more about two problems: (1) providing more privacy—to make up for what we are losing in our work-a-day lives and (2) thinking in terms of fewer materials—more and more good design is becoming a process of elimination."—Wm. Lyman

Like "plan freedom together with pleasing space concepts for interiors and a close relationship with the exterior." Dislike "a frequently found clumsy heaviness in exterior expression." — Fred L. Markham

Like "visual spaciousness even in limited space; abundance of light, air, sunshine; easily maintained, hard and smooth surfaces; convenience of built-in equipment and furniture." Dislike "arbitrary and undisciplined freedom with structure and form; lack of coördination of mechanical work with structure. House is basically 'cellular,' each requiring privacy from sound, vision, odor, moisture, light, etc. Open 'space dividers' ignore this fact." — George Matsumoto

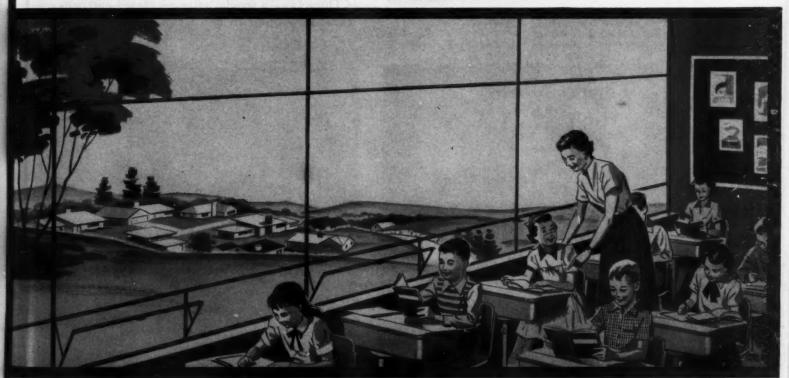
"The house is getting smaller as we get more gadgets, e.g., a dishwasher costs \$200, so we take \$200 out of the house size. I think that we are reaching the point of diminishing returns. One can make space multi-usable as in a trailer, airplane or pullman-car, but the cost of that multi-use is reaching the point where it would be cheaper to build more space. . . . A change in thinking concerning the living room, study, etc., seems to be taking place though not yet completely realized. The old-fashioned farm kitchen - a family room with kitchen, piano, T.V., sewing, fireplace, hobby (not shop) — seems to be coming back. The old-fashioned sitting room or parlor (a small formal living room) is provided for quiet and for guests not yet taken into the inner family circlethe Japanese foreigners' room idea." -Francis Joseph McCarthy

Like "trend toward simple straightforward solutions reflecting contemporary trends; honest use of materials; use of the module to achieve discipline and to make use of components; inter-relating rooms and parts to the whole; emphasis on exterior space planning." Dislike "buildings not related to their sites; too much (Continued on page 306)

The



Nature is a happy part



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A "Daylight Wall" classroom is a happier classroom because it doesn't shut nature out . . . or children in.

Clear glass from wall to wall and sill to ceiling gives the whole room a feeling of bright alertness and openness.

Cuts costs, too. Artificial lighting isn't needed so much. There's less wall area to paint and maintain, and building costs

are lower than in many other types of construction.

In cold climates, your daylight walls should be Thermopane* insulating glass for maximum comfort and heating economy. Write for your free copy of How to Get Nature-Quality Light for School Children. Dept. 4155, Libbey Owens Ford Glass Company, 608 Madison Avenue, Toledo 3, Ohio.



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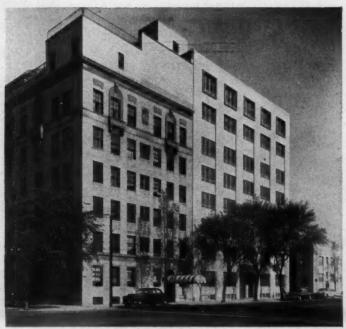
WHY CRANE DURACLAY IN IN LARGE HOSPITAL F

New Mazel House Addition to Chicago's Edgewater Hospital specifies CRANE

Large hospital plumbing fixtures are frequently subject to severe thermal shock while in use. The result is crazing and cracking of the fixture . . . and a need for replacement long before it has given its money's worth in service.

But that doesn't happen when you specify Crane fixtures.

Because large Crane hospital fixtures are made of Duraclay—a special vitreous glazed earthenware developed in the Crane laboratories.



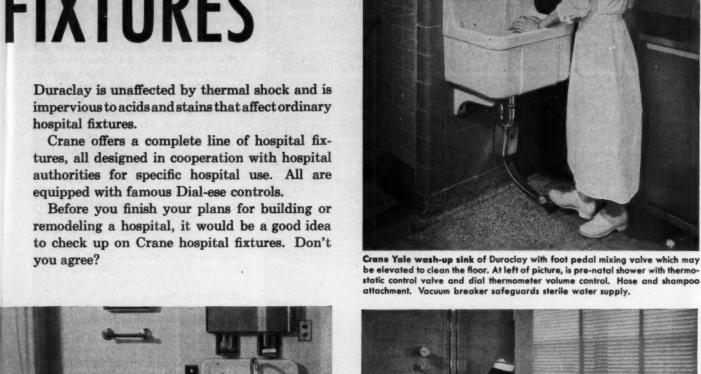
Mazel House Addition, Edgewater Hospital, Chicago, Illinois. Architect: Edward P. Steinberg. General Contractor: Gust K. Newberg Construction Co. Plumbing Contractor: World Plumbing Company.



Crane Mayo surgeons scrub-up sink of Duraclay, permits surgeon to scrub to shoulder without touching non-sterile parts of fixture. Dial-ese foot pedal mixing valve for hot or cold water, or mixed flow.



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Crane pre-natal bath of Duraclay. Cut-out sides for ease of access. Thermostatically controlled water supply. Vacuum breaker safeguards sterile water supply against siphonage. Deviator spout for diverting water to spray.

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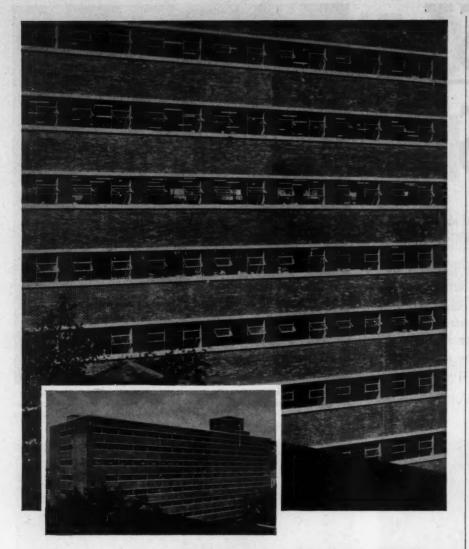
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QUOTES FROM PARTICIPANTS

(Continued from page 302)

reliance on worn clichés; over-use of glass as a substitute for design." — Bruce McCarty

Like "experimentation, disciplined design, economical detailing." Dislike "sentimentalism, ostentation." — John M. Morse

"Space arrangement is a multi-sensorial affair with quite a few senses involved apart from the eye. We listen subconsciously to minute reverberation coming to us from room expansions here and there. our locomotion has sense impressions as its accompaniment. The space is never without material enclosure with thermal and olfactory appeal. And architectural space has different form from Euclidism space always 'direction,' emphasized by surface and color treatment and by openings of the enclosure. . . . Materials are overstressed, psychologically speaking, as 'novelties.' Material assembly must endure for an amortisation period, without fatiguing impression of obsolesence. The human material with its responsibilities is the oldest the architect has to handle." -Richard J. Neutra

Like "simple design, open planning, use of color, large glass areas if properly orientated for view, privacy and climate." Dislike "use of too many different materials, bad circulation in planning, tricky nonessential detail." — Harry E. Ormston

Like "consideration of individual's needs not only physical but emotional; increasingly greater deliverance from the shackles of trends; functionalism without early attendant stability." Dislike "fadism; use of the same tricks, mannerisms and clichés; apparent disregard in plan for the fact that certain aspects of housekeeping, in spite of mechanical inventions, are still disagreeable, particularly from the standpoint of noise, such as garbage disposers, dishwashers, etc." — Vladimir Ossipoff

"The custom-designed house may be considered the most complicated of buildings. It is designed to satisfy functions that are often in conflict with each other. Usually there is a limiting budget to further frustrate the architect." — Aaron Resnick

'The need for planning for economy is a challenge that is evolving a vocabulary of special design with an applicability to contemporary needs that is beginning to rival that of the stendard plans of the past." — Carleton R. Richmond, Jr.

Like "the honest attempt by many of the leaders in the profession in trying for an architecture indigenous to the locale." — R. Gommel Roessner

(Continued on page 310)



Year 'round comfort for institutional or commercial installations . . .



without costly duct systems!

Modine AIRditioners* are the modern, economical way to air-condition old or new buildings

Modine AIRditioners eliminate expensive duct systems and structural alterations. Cold water from a central chiller is piped to each unit for summer cooling. Heating water is supplied by a central boiler. The same piping — water supply and drain — serves for both cooling and heating. Yet, AIRditioners are individually controllable by room occupants.

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OVERHEAD MODELS—available with or without plenum and filters for use in furred overhead space.



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 Milwaukee, Wis.
 Architect: Milwaukee County Architects' Office
 Contractor: Milwaukee County Const. Dept.
 2. Central Office Bidg., Dept. of Employment
 Sacramento, Calif.
 Architect: Calif. State Dept. of Public Wks.,
 Div. of Architecture
 Contractor: George A. Fuller Co.
 3. General Telephone Co., Santa Monica, Calif.
 Architect: Albert C. Martin & Assoc.
 Contractor: George A. Fuller Co.
 4. City-County Bidg., Detroit, Mich.
 Architect: Harley, Ellington & Day
 Contractor: Bytant & Detwier
 5. Ford Motor Administration Bidg.
 San Jose, Calif.
 Architect: Albert Kohn Associated Architects
 & Engineers, Inc.
 Contractor: J. H. Pomeroy
 6. State Office Bidg., Pittsburgh, Pa.
- 6. State Office Bldg., Pittsburgh, Pa. Architect: Altenhof & Bown Contractor: Navarro Corp.
- 7. Office Building for the Norfolk Division of The Texas Co., Norfolk, Va. Architect: E. Bradford Tazewell Contractor: Dayle & Russell
- Standard-Thompson Co., Vandalia, O. Architect: Lorenz & Williams Contractor: Maxon Construction Co.
- Pennsylvania Thresherman & Farmers Insurance Co., Harrisburg, Pa. Architect: Edmund G. Good Contractor: Ritter Brothers
- 10. West Penn Power Co. Office Bldg. Greensburg, Pa. Architect: Hoffman & Crumpton Contractor: O. H. Martin Associates









USED FROM COAST TO COAST

system has unlimited electrical availability built right in!

Fenestra* Electrifloor† has been chosen for these new office buildings, state and federal buildings, airport terminals, plant office buildings and for other major buildings all across the country.

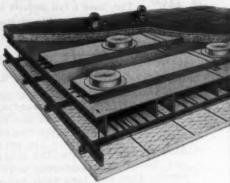
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Investigate Electrifloor for your next building. To utilize all of its advantages, you should design the building around it. Get complete details, now, before you start your plans. Fenestra's nationwide sales organization will co-operate with and assist you. Write Detroit Steel Products Co., Dept. AR-5, 2252 East Grand Boulevard, Detroit 11, Michigan.



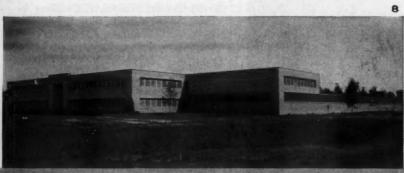
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- 5. Designed for greater strength with lighter dead weight, giving you unusual structural design economy.



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that will last the life of your building

There are four factors that make an abrasive metal tread safe and durable: (1) Weight of the abrasive granules per square foot, (2) size of the granules, (3) uniformity of distribution, (4) average number of granules per representative square.

Feralun abrasive metal treads are quality-designed and made. They have a full measure of non-slip granules. And they are cast to last the life of your building. For handy reference, here's a simple short form specification:

Treads, Thresholds, Elevator Door Sills, Floor Plates, Trench Covers - Exposed wearing surface to contain not less than two (2) ounces per square foot of abrasive granules embedded in the top metal surface not less than 1/16 inches while the matrix is in a molten state. Size of non-slip granules shall range from #16 to #24 and distributed uniformly over the surface in such a manner that not less than an average of ninety (90) individual granules can be counted in any three representative 1/2" x 1/2" squares of any portion of the finished surface.

Pattern of finished abrasive surface shall be either "hatched", "fluted" or "plain", as required. Of (Feralun, Alumalun, Bronzalun, Nicalun) non-slip abrasive metal, as fabricated by the American Abrasive Metals Company, Irvington, N. J., or of approved equivalent in kind, quality, function and characteristics.

Why FERALUN provides lasting safety

Here is an unretouched photograph of a Feralun tread taken after acid treatment. (Paint is removed and acid is used to eat away the metal base so as to isolate the actual abrasive content of the tread.) Note the full and even distribution of abrasive—for greater safety, longer wear.

Here is an unretouched photograph of an abrasive tread, purchased on the open market of the type often offered as an equal of Feralun, after the identical acid test. Note the meager amount of abrasive and spotty distribution.

ERALU

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AMERICAN ABRASIVE METALS CO. . IRVINGTON 11, N.J.

QUOTES FROM PARTICIPANTS

(Continued from page 306)

"The thing that we like most about present-day houses is the improvement in kitchen and bath design, and also the general use or family room. We dislike very much materials . . . that date or cheapen a house." - Moreland Griffith Smith

Houses "are getting more open, airy and larger. I especially like the fact that more floor space is being devoted to the living areas of the house." - William Rowe Smith

"Houses are becoming less stark, having more warmth and a better feeling for materials." Dislike "the box-like glass type that generally seems foreign to its setting." - Louis F. Southerland

Like "recognition of patterns of 'family' life in design resulting in new opportunities for creative living." - Calvin C.

Like "simplicity of plan; ease of maintenance; directness; flow of space; indooroutdoor living; informality." Dislike "misuse of large glass areas; clichés such as 'planters'; lack of storage for bulky articles; too 'clinical' look." - Carl A. Strauss

On fewer partitions: "all elements should appear to float — as all space seems larger by the use of glass or open space above head height." - Robert W. Vahlberg

Like "open planning, forthright use of materials, general clean lines." Dislike "lack of thorough study often evident, resulting in disturbing forms, - exhibitionism." Note "slight retirement from uninhibited open planning, still seeking its virtues." - F. Talbott Wilson

"I like the keener awareness by the public of the beauty of structure in houses, which is sweeping across the country. I believe that from this acceptance, newer forms in structure will emerge in creative work. . . . I dislike the seeming similarity in usage and appearance of exposed structure, the horizontal beam and the vertical glass. . . . Lack of imagination could lead to stagnation." — Worley K. Wong

Like "thoroughly integrated design of space, form, detail, function so that living in a house is a motivating experience which enhances the owner's particular way of life." Dislike "misused clichés." - Thomas W. D. Wright

Like "warmth of natural woods, bright colors for contrast, simple planning and detailing, proper use of modern materials
— minus frills." — John G. York

Announcing

AN IMPORTANT COMPETITION

The Upholstery Leather Group, a non-profit association of American tanners of upholstery leathers, announces a Leather in Decoration Design Competition.

The purpose of this competition is to encourage American designers to use leather for home decoration in imaginative ways. Because Europeans have used leather in exciting as well as practical ways for centuries, and as a salute to the A.I.D. Floating Conference and Tour of Europe, this competition will be sub-titled "European inspired—American created."

Awards will total \$6000: \$1000 being given for the best entry in each of five classifications, and an additional \$1000 being awarded for the most original use of leather in any one of the five classifications.

The coupon below will bring you an amplification and explanation of the competition rules, as well as a wealth of information on the latest developments in upholstery leather. Fill it out and return it today!

COMPETITION RULES

The Leather in Decoration Design Competition includes five classifications: I Furniture; II Architecture; III Decorative Accessories; IV Decorative Design for Printing, Tooling, or Embossing; V Complete Room Setting.

- The competition is open to all practicing designers, decorators, and architects. A cordial invitation is issued especially to members of the A.I.D., I.D.I. and A.I.A. to participate.
- Entrants may submit a single design in one or more of the five classifications. The bonus prize of \$1000 will be awarded in addition to one of the five winners.
- 3. Each design submitted must be presented on 18 by 24 inch white artist board. Designs may be in black and white or color.
- Entries will be tabbed with numbers on labels so that judging will be done without identification.
 Designers are requested to have designs photostated prior to mailing.
- 5. Winning designs will become the property of The Uphoistery Leather Group and will be pre-

sented at the 1956 Leather in Decoration Show in January. Any other designs selected to be presented at the show will be included only with the written permission of the designer.

- Winning designs in the Leather in Decoration Show will receive national magazine, newspaper, TV and radio publicity and advertising. All publicity and advertising will be handled by The Upholstery Leather Group.
- 7. The competition will run from May 1 through July 15. All entries must be postmarked prior to July 15, 1955, and sent to Design Competition, The Uphoistery Leather Group, 141 East 44th Street, New York 17, New York.
- Winners will be announced at the 1956 Leather in Decoration Show in January, 1956.

The decision of the judges shall be final.

Judges for the competition will be leading designers and authorities on design, headed by C. Eugene Stephenson, President, American Institute of Decorators Only genuine leather wears as well as it looks

The Upholstery Leather Group, Inc. Dept. 25, 141 East 44th Street, New York 17, N. Y.

Please send me amplification of the rules for the Leather in Decoration Design Competition. Also send me your kit of up-to-date facts on genuine upholstery leather.

An Architectural Achievement

New Home of Panellit, Incorporated

Skokie, Illinois



Congratulations to Dubin and Dubin

Here is Dubin and Dubin's successful solution to special problems in lighting, air conditioning and communications. They provided many quiet, well-lighted and ventilated work areas - all virtually dust-free for Panellit's designers and engineers.

This new 82,000 sq. ft. building of steel, concrete and brick houses office, factory and assembly space.

Also, special attention was given to the personal comfort of the employees: immaculate First Aid and Rest Rooms, Lockers, Kitchen and Cafeteria. The Reception Room, too, reflects the progressive outlook found at Panellit. Naturally, Westinghouse Water Coolers were specified to contribute to this atmosphere of quiet and comfort.

Contemporary precision keynotes the entrance to Panellit, Incorporated's new home. Seven landscaped acres, with ample parking space, provide an ideal setting for Panellit's engineering and manufacturing of industrial controls -many vital in Atomic Energy production.

WSB3B 3-gallon



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8-gallon Static Air Cooled









Dubin and Dubin, Architects, made sure with

Westinghouse Water Coolers—the choice of more and more leading architects and construction engineers. This ever-increasing stamp of approval is in recognition of the superior quality and performance built into every Westinghouse Water Cooler.

Quiet...Dependable Operation is assured with the new Solenoid Water Valve. There's no stem packing to leak, no moving parts to wear out. And the entire water system is completely sealed in — for years of maintenance-free service.

Superior Performance from Automatic Stream Height Regulator. No spurt, no splash, no dribble — regardless of water pressure changes. Patented Pre-Cooler and Super Sub-Cooler deliver more cold water for less money. Cold waste water pre-cools incoming water ... sub-cools hot refrigerant.

Greater Economy — Only Westinghouse offers Dual Electric Control at no extra cost. Either the finger tip or toe tip control operates bubbler valve electrically. Stainless steel, splash-proof top is sanitary, unbreakable. And every Westinghouse Water Cooler is covered by 5-year Guarantee Plan.

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shows at a glance how many hundreds of dollars the Westinghouse Pay-Way Plan can save every year. Based on extensive time and motion studies, this Plan can indicate savings of as much as \$350 for every 50 employees! To determine savings under the Pay-Way Plan see this handy Westinghouse computer. Call your Westinghouse Water Cooler Distributor today. He's listed in the Yellow Pages of your telephone directory.



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THE RECORD REPORTS

(Continued from page 16)

the 36th annual convention of the Associated General Contractors of America. Inc.

The contractors long have thought that this paradox of unusually tight competition in a steady or rising market might reverse the prosperity trend, but the builders of heavy works are in what appears sure to be their tenth consecutive record year judged by construction put in place. They now are confident that they enjoy the capacity to handle any increase in volume they might face; the President's \$101 billion highway improvement and construction program projected for the next 10 years would not impose too heavy a burden on their facilities, they say.

The convention installed new officers elected earlier by mail ballot. George C. Koss, Koss Construction Co., Des Moines, Ia., is the 1955 president, suc-

ceeding John MacLeod of Paramount, Calif. Mr. Koss heads a firm which is one of the country's largest builders of highways and airports. Frank J. Rooney, of Frank J. Rooney, Inc., Miami, Fla., building contractors, was installed as vice president. William Muirhead, of the William Muirhead Construction Co., Durham, N. C., rounding out a decade as A.G.C.'s secretary-treasurer, was re-elected to that position. The officers serve one-year terms.

Twenty-four newly elected national directors also were installed at New Orleans. These officers are elected from the states by the membership and form a portion of the total board membership of more than 80 chosen each year.

The Building Contractors' Division report, the one of greatest significance for architects, was handled by Mr. Rooney, chairman, and Welton A. Snow, division manager. It covered these points:

- 1. A recommendation that to free credit frozen by retained percentages, the A.G.C. should continue to work with other industry groups toward a policy similar to that contained in standard Federal contract forms. It was decided that the general contractors would not try to devise a new formula of their own at this time. (A New York meeting on retained percentages held early last month moved the groups toward closer agreement.)
- American Institute of Architects standard document forms are being studied jointly with the Institute to improve insurance coverage for both owners and contractors.
- More emphasis should be placed on apprentice training if the tremendous personnel demand for future work is to be met.
- Continued use of Invitation to Bid forms in inviting bids from subcontractors was recommended.

The general contractors were urged to continue and strengthen their protests against subcontractor efforts to secure national legislation forcing listing of bid prices on government work.

There was no new "bid-shopping" bill before Congress last month, but the general contractors expected some such legislation to be introduced before Congress adjourned.

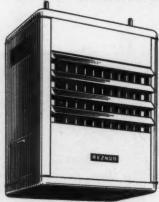
The 1956 A.G.C. convention will be at the Waldorf-Astoria Hotel, New York City, next February 13–16. The organization's mid-year board meeting will be held in Minneapolis September 28, 29, and 30, this year.

- Ernest Mickel

Specify the heating system your



for all industrial and commercial buildings



You don't have to choose between a heating plant which is too big for the present and one which may be too small for the future. Specify Reznor gas unit heaters for all your commercial and industrial buildings. You can start with just enough heaters to meet original requirements. As the building is expanded, or heating requirements increase, additional units can be added quickly and economically to carry the extra load.

Reznor heat is on-the-spot heat. Each unit acts independently, producing and distributing heat as it is needed in the immediate area. More area — more

heaters. Hang them, connect gas and electric lines and the installation is completed. Reznor heaters are easily shifted to accommodate partitions and other internal remodeling, too.

Bulletin SA-541, "Application of Gas Unit Heating," is full of helpful hints on how to plan a successful unit heater installation. If you haven't seen it yet, write today for your free copy.

Reznor Manufacturing Company, 62 Union Street, Mercer, Pa.







Airview of Grace Bleachery, the world's largest . . . recently enlarged by The Springs Cotton Mills at Grace, S.C. Engineers and Architects: Robert & Co. Associates, Inc., Atlanta, Ga.; Roofers: Ingold Company, Inc., Hickory, N.C. and Arvett & Ledbetter Roofing and Heating Co., Charlotte, N.C.

On Springs Cotton Mills' 16-acre bleachery roof FOAMGLAS insulates effectively because it stays dry

On this 16-acre roof of their Grace Bleachery, The Springs Cotton Mills has found that FOAMGLAS insulates effectively because it can't absorb moisture and lose insulating efficiency.

Installed in 1947 on the original bleachery roof, FOAMGLAS has effectively kept down condensation on the roof slab and conserved heat in the winter. Seven years later it was picked again to insulate the roof of a major addition to this bleachery, the largest in the world.

This unique cellular glass insulation has been used extensively by the Springs Mills in other ways . . . on 350° steam lines . . . in cold storage spaces . . . and

on 20 additional acres of mill roofs including one in Lancaster, S.C. covering more looms (7,500) than any other roof in the world.

It will pay you to get the full story on the use of FOAMGLAS for buildings, cold storage space, piping, or tanks and equipment. Please write today for a sample and literature indicating your specific interest.

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THE RECORD REPORTS

(Continued from page 314)

ON THE CALENDAR

May-

- 1-4 Annual Meeting, Chamber of Commerce of the United States — Washington, D. C.
- 5-7 Regional conference of the A.I.A. South Atlantic District — Fort Sumter Hotel, Charleston, S. C.
- 6 Second Annual Conference for Engineering, a review of engineering progress and prospects— Ohio State University College of Engineering, Columbus, Ohio
- 9-13 Annual convention, National Restaurant Association, including architectural and remodeling exhibit — Navy Pier, Chicago
- 12-13 Annual meeting, Steel Joist Insti-

tute — The Greenbrier, White Sulphur Springs, W. Va.

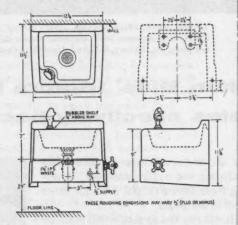
- 12-14 Automation Engineering for tomorrow; a symposium on the application of automation to building design and construction, sponsored by the School of Engineering, Michigan State College East Lansing, Mich.
- 16-20 Annual meeting, National Fire Protection Association — Netherlands Plaza Hotel, Cincinnati
- 16-20 Material Handling Exposition; theme, "The Concept of Obsolescence" — International Amphitheater, Chicago
- 18-20 Midyear Division Conference, Porcelain Enamel Institute — Edgewater Beach Hotel, Chicago
- 22-26 The 48th Annual Meeting of the Air Pollution Control Association — Sheraton-Cadillac Hotel, Detroit.
- 25ff Annual Exhibition, Philadelphia
 Chapter, American Institute of
 Architects; until June 5 Philadelphia
 Art Alliance, 251 South
 18th St., Philadelphia
- 29ff Ninth International Congress, International Hospital Federation; until June 3 — Lucerne, Switzerland
- 30ff American Hospital Association Hospital Planning Institute and Workshop; until June 3 — Shamrock Hotel, Houston
- 30ff Canadian International Fair; until June 10 Exhibition Park, Toronto, Ont.

HAWS FOUNTAIN! a product of modern styling Model No. 7X Acid resisting ename!

FOR PERFECT ADAPTATION

to current architectural trends... and constructed of durable acidresisting enameled cast iron to withstand the severest abuses of the school yard, this new HAWS drinking fountain assures lasting trouble-free service.

HAWS Model No. 7X drinking fountain contains HAWS complete sanitation features... with raised, shielded, angle-stream fountain head of chromium plated brass. Water pressure and volume is automatically controlled... it's antisquirt!



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Industrial Designer

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June-

- 2-4 Annual meeting, National Society of Professional Engineers — Philadelphia
- 5-19 Fourth Annual Boston Arts Festival, including an exhibition of New England printing, sculpture, graphic arts and architecture — Public Garden, Boston
- 7-10 National Spring Meeting and Welding Show — Hotel Muehlebach and Kansas City Auditorium, Kansas City, Mo.
- 8-11 The 1955 British Architects'
 Conference Harrogate, England. For program: C. D. Spragg,
 Secretary, Royal Institute of
 British Architects, 66 Portland
 Place, London W. 1
- 8-18 Conference of International Organization for Standardization Stockholm
- Opening of international exhibi-(Continued on page 320)



CLAY PIPE Sewers and Drains New CHEVROLET Engineering Center

More than seven miles of Vitrified Clay Pipe, in diameters up to 27-inch, have been installed in the drainage and sanitary systems of Chevrolet's new \$20 million Engineering Center near Detroit. Architectural and engineering work was handled by the Argonaut Realty Division of General Motors. Installation was under the supervision of Clay Langston of Bryant & Detweiler Co., general contractors, and Charles McGee Jr., of Holloway & Thompson Construction Co.

In the new Chevrolet Engineering Center, Clay Pipe drainage and sanitary lines have been combined with a privately owned sewage treatment plant to create what might well be called "the industrial waste disposal system of the future." Clay Pipe is the company's assurance of trouble-free service, and the privately owned treatment plant is the community's insurance that industry will continue to be a good neighbor.

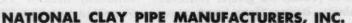
For industrial or other construction, where permanency is the watchword, drainage and sanitary lines must be down for "keeps." That's why Vitrified Clay Pipe is the universal preference of engineers and contractors. They depend on it because it never wears out.

For permanent drainage lines and storm sewers—to protect permanent construction—always specify Vitrified Clay Pipe. It's guaranteed for half a century!



CLAY PIPE FITTINGS SIMPLIFY INSTALLATION

You never have a "patchwork" of materials when you install Vitrified Clay Pipe. This Hub, for example, permits connection of two spigot ends. It's only one of dozens of readily available fittings made of the same never-wearout Vitrified Clay as the pipe itself.



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311 High Long Bldg., 5 E. Long St., Columbus 15, Ohio 703 Ninth & Hill Bldg., Los Angeles 15, Calif. 100 N. LaSalle St., Rm. 2100, Chicago 2, Ill. 206 Connally Bldg., Atlanta 3, Ga.



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or fitting, etc. Doors and Frames come with a baked-on prime coat of paint. (3) They cost less to maintain because they can't warp, swell or splinter.

For complete information on Fenestra Entrance Doors, Flush or Regular Interior Doors with glass or metal panels, and Doors with the Underwriters' B Label, write: Detroit Steel Products Co., Dept. AR-5, 2252 E. Grand Blvd., Detroit 11, Michigan.



Architectural, Residential and Industrial Windows . Metal Building Panels Electrifloor* • Roof Deck • Hollow Metal Swing and Slide Doors

THE RECORD REPORTS

(Continued from page 316)

tion of architecture and allied arts — Helsingborg, Sweden

- 13-18 International Design Conference
 Aspen Institute, Aspen, Colo.
- 14-24 Plastics in the Design of Building Products: a special summer program covering technical fundamentals and design principles — Massachusetts Institute of Technology, Cambridge, Mass.
- 19ff Second annual material handling training conference; until July 2
 Lake Placid, N. Y. For information: James R. Bright, Director, % Harvard Business School, Boston 63, Mass.
- 20-23 National Convention, Forest Products Research Society — Seattle
- 20-24 The 63rd Annual Meeting, Amer-

ican Society for Engineering Education — Pennsylvania State University, State College, Pa.

- 20-24 The 87th Annual Convention, American Institute of Architects
 — Hotel Radisson, Minneapolis
- 22-25 National Conference on Instruction in Landscape Architecture — Allerton Park (country conference center of the University of Illinois) Monticello, Ill.

26ff Annual meeting, American Society for Testing Materials; until July 1 — Chalfonte-Haddon Hall, Atlantic City, N. J.

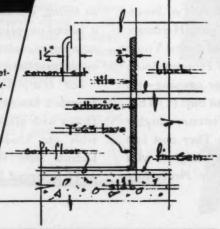
- 27-29 First Annual Meeting and Technical Conference, American Nuclear Society Pennsylvania State University, State College, Pa.
- 27ff Summer General Meeting, American Institute of Electrical Engineers; until July 1 New Ocean House, Swampscott, Mass.
- Built in Latin America; an exhibition of examples of 20th century Latin American architecture selected by Henry-Russell Hitchcock and photographed by Rosalie Thorne McKenna; until Sept.

 5 Museum of Modern Art, 11
 West 53rd St., New York City
- 29ff III Biennial of the Museum of Modern Art of São Paulo; until Oct. 12 — Parc d'Ibirapuera, São Paulo, Brazil

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ROMANY TILE
SPACE ADVANTAGES

Now with direct adhesive ROMANY tile setting, tile of any color offers real space savings applicable to high cubic foot costs. Consider the difference of a total of one-half inch thickness from rough block to finished tile as opposed to approximately 1½". When a long corridor is figured, this saving in cubic area amounts to an interesting item. It makes useful much space previously allotted to vertical wall areas, or it materially reduces overall cubage with less room and floor. It also offers lower cost dry wall construction where desired.



Every Architect should have our Sample Tile Chart No. 15. It's free.

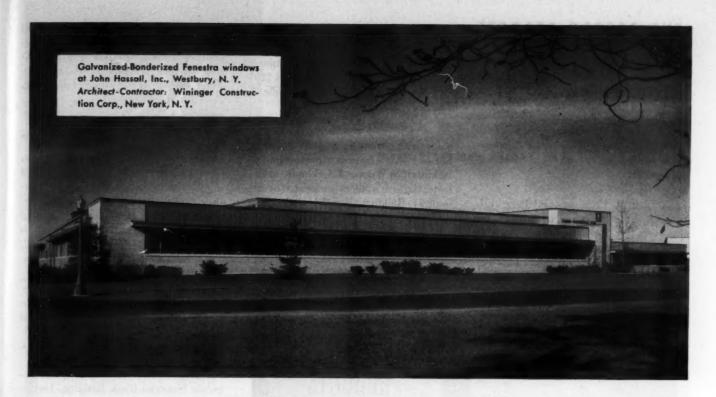
UNITED STATES CERAMIC TILE COMPANY

Member: Tile Council of America and Producers' Council, Inc. 217-H FOURTH ST., N.E., CANTON 2, OHIO

July-

- 3-8 The 93rd Annual Convention, National Education Association — Chicago
- 3-9 Annual conference, American Library Association — Convention Hall, Philadelphia
- 5-15 Soil Engineering for Airfields and Highways; a special summer program under the direction of Dr. T. William Lambe, associate professor of soil mechanics, Department of Civil Engineering — Massachusetts Institute of Technology, Cambridge 39, Mass.
- 10-19 Ninth Panamerican Congress of Architects (postponed from March) — Caracas, Venezuela
- 11-16 Fourth Congress of L'Union Internationale des Architectes—
 The Hague-Schveningue, The Netherlands
- Sixth annual architecture and planning workshop; until Aug.
 24 Instituto Tecnologico de Monterrey, Mexico

(Continued on page 322)



Far Lower lifetime window cost!



Super Hot-Dip Galvanizing is done in Fenestra's own special plant—the only one of its kind in America. A uniform coating is assured by complete immersion in molten zinc.

To start with, they're stronger, because they're made of solid bar steel sections. And this strength is permanently preserved by an exclusive double protective coating. Super Hot-Dip Galvanizing alloys a thick zinc coating with the steel. This is done in Fenestra's own special plant. Then a process called Bonderizing adds a nonmetallic coating over the zinc. The result is the most maintenance-free windows ever made! And the cost of this modern, durable finish is as little 4s the cost of two inside-outside field coats of paint!

For complete information, contact your local Fenestra* representative. He's listed in the yellow pages of your phone book. Or write for our free booklet on Fenestra Super Hot-Dip Galvanizing and Bonderizing. Detroit Steel Products Co., Dept. AR-5, 2252 East Grand Boulevard, Detroit 11, Michigan.

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- More daylight and better ventilation

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ARCHITECTURAL AND RESIDENTIAL WINDOWS . METAL BUILDING PANELS ELECTRIFLOORS . ROOF DECK . HOLLOW METAL SWING AND SLIDE DOORS

THE RECORD REPORTS

OFFICE NOTES

Offices Opened-

- Dudley Dean & Associates, Consulting Engineers, have opened offices at 58 Second St., San Francisco, for the practice of mechanical and electrical engineering.
- Norman H. Freedman and James Edward Clements have announced the

(Continued from page 320)

establishment of their firm, Freedman & Clements, Architects. Offices are at 1201 San Marco Boulevard, Jacksonville 7, Fla.

- J. Craig Weaver and William E. LaLonde have formed a partnership to be known as Weaver & LaLonde, Architects; the firm's offices are located at 204 Central Building, Twelfth and Main, Vancouver, Wash.
- Stanford Woodhurst Jr., A.I.A., and Gilbert J. O'Brien Jr., A.I.A., have announced their association in a partnership for the practice of architecture. Their address is the WBBQ Building, 515 15th St., Augusta, Ga.

Firm Changes-

• Seelye Stevenson Value & Knecht, Consulting Engineers, have announced the admission of these men to partnership: Gilbert D. Fish, A. Roger Kelly, Erik B. J. Roos, Stephen D. Teetor and Harold S. Woodward. The firm's offices are at 101 Park Ave., New York 17.

New Addresses-

Alfred Benesch & Associates, Consulting Engineers, 111 W. Jackson Blvd., Chicago 4, Ill.

Dollar, Bonner and Blake, Architects, 1103 Madison St., Wilmington, Del.

George F. Harrell, Architect, 819 Republic National Bank Building, Dallas. LaPierre, Litchfield & Partners, 292 Madison Ave., New York, N. Y.

Ryder, Struppmann and Neumann, Architects, 90-04 161st St., Jamaica, N. Y.

Laurence Schwall, A.I.A., 51 Meadow Dr., Northfield, Ill.

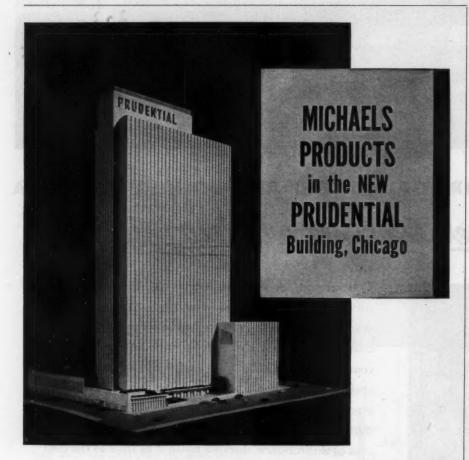
George A. Spooner, Architect, 717-61st St., Des Moines, Iowa.

Allan Scott Wales, A.I.A., E. J. Kennedy Associates, 2 Niles St., Bakersfield, Cal.

Engineering Award to Winne

THE JOHN FRITZ MEDAL for 1954 was awarded in February to Harry A. Winne of Rexford, N. Y., electrical engineer and a retired vice president of General Electric Company, "for service to his country in war and peace through his distinguished leadership in the electrical industry." Winner of the Medal, which was established in 1902, is selected by a committee from the four founding societies - the American Institute of Electrical Engineers, the American Society of Mechanical Engineers, the American Institute of Mining and Metallurgical Engineers and the American Society of Civil Engineers. Previous recipients have included George Westinghouse, Alexander Graham Bell, Thomas A. Edison, Orville Wright, Guglielmo Marconi, Elmer A. Sperry, Herbert Hoover, Charles F. Kettering, Vannevar Bush and Benjamin F. Fairless.

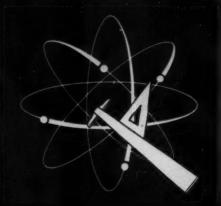
(More news on page 326)



Builders of the Mid-America Home Office of the Prudential Insurance Company used Michaels as one source of supply for many of the metal building products being used in its construction. Michaels fabricated all aluminum components except windows and curtain wall panels. These included the letters "PRUDENTIAL" at the top of the building; store fronts; the 20 story high louvers, said to be the world's highest, also all bronze work, and the 24-foot lobby columns of stainless steel. Michaels ferrous and nonferrous metal building products have become an important part of many of the nation's prominent structures.

Recently Michaels moved into a new factory and office building which contains 85,000 square feet of floor space. Here expanded facilities mean even better service for you. Contact Michaels on your next project. The high quality of their products is well known, and you'll find them a thoroughly reliable source of supply.

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new ideas bring more livability,
comfort, safety and value
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Team-Mate Builder: W. A. Simms,
NAHB, Dayton, Ohio.
Engineers: Ralph & Curl, Columbus, Ohio
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A two-story, split level home offering extra floor space for small ground area. Upper story provides maximum privacy for family living . . . lower level is an isolated living-recreation room. Balanced winter comfort for each of these levels is provided by radiant baseboard heat supplied by a Janitrol Gas-Fired Boiler.

The U. S. Gypsum Research Village is an outstanding example of architect-builder-manufacturer cooperation in conceiving new methods and ideas for bringing home owners quality housing at reasonable cost. This extra quality adds little to the original price, yet means substantial savings in maintenance and operating expense for the life of the home.

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Attaches ROCKLATH to standard metal grillage

not more than 16" o.c. The spring action of the Brace-Tite* Clips supports the Rocklath Plaster Base across its full width increasing its rigidity. The wire clip embedded in the plaster actually strengthens the lath and plaster assembly.

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CLASSROOMS—Specify TRUSSTEEL STUD-ROCKLATH Partitions... for required fire protection... for extraordinary quiet (up to 48.0 db sound transmission loss ratings)... for various wall thicknesses... for light weight which can mean savings in structural framing.

CORRIDORS—Specify TRUSSTEEL STUD-ROCKLATH Partitions... for strength from steel stude of efficient truss design... for simplified concealment of pipes, ducts, conduits... for low material costs and economical erection.

CEILINGS—Specify the BRACE-TITE ROCKLATH Lathing System...for easy, low-cost installation...for rigid, full support of the lath...for fire-rating up to 4 hours...for vapor resistance of 0.79 perms when insulating ROCKLATH is used as the plaster base.

NOTE: a special BRACE-TITE Clip is available if acoustical tile is to be cemented directly to the ROCKLATH.





UNITED STATES GYPSUM

The greatest name in building

THE RECORD REPORTS: VIEWS OF RECENT PERIODICALS

(Continued from page 322)

SINKENTIKU, February 1955. Reversing an old Western custom, the Japanese monthly examines the impact of the Occident on Japanese architecture. The lead article, "Architecture and the People" by Kon Waziro, discusses the breaking up of traditional Japanese manners and customs by the force of "capitalism." "Modern architecture in Japan," he observes in the English translation, "is a kind of fashion in its

broad sense like dress, hair and beauty art fashion. Therefore, in the modern world, there is no discussion concerning the eternal beauty. Japanese people are seeking for [this] modern beauty. . . . From this point of view, there is apparently some question in imitating traditional Japanese design, the beauty of which was created by aristocrats." Concluding, Mr. Kon says that "it is necessary for architects to seek for the tradi-



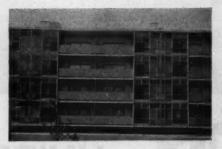
Above: the old—classic farm architecture near Nara. Below: the new—house in Tokyo designed by architect Nagamatu Wataru for a family of eight. Sinkentiku says, "Nagamatu is one of hopeful, young architects"



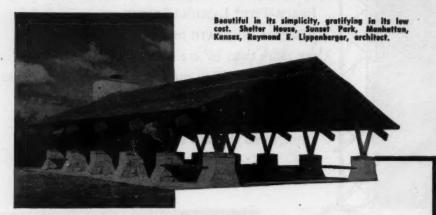
tional beauty, at the same time to do their best to give unexpensive pleasure for the busy working people. These two contradictory aims are the inevitable consequence of capitalistic society."

Richard Haag, in a "Memo to Japanese Designers," is somewhat less resigned to compromise. Mincing no words, Mr. Haag says, "Japan is sick." He continues, "This nation suffers from a chronic disease of indigestion resulting from the over-consumption of under-cooked foreign recipes and half-baked ideas. You have many apologists, soothsayers and cultists, but few doctors who properly diagnose the disease, and even fewer who prescribe correctly. . . And you designers, who should be the doctors, are the cooks who serve up this conglomeration of reheated rehash."

(Continued on page 330)



Above: The Nakai Apartment House, one of the buildings in a housing project built by the Asahi glass factory for its workers; design by Sibaoka Iso



"ONE of the finest materials..."

Raymond E. Lippenberger, architect, of Manhattan, Kansas, writes "One of the finest materials that the architect has to use as a medium of expression is laminated wood as a structural material . . . Since the development of wood laminates it has extended the use of wood as an economical structural material keeping a simplicity of line and form."

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The whole technology of glass-making has been up-graded. An increasing variety of patterns and sizes is being made available, until today many architects consider the glass block panels to be an important part of the aesthetic effect of the building. Imaginative design, daringly applied, has resulted in glass block panels that literally seem to float in air.

In matters of design, no two architects think alike (thank heaven!). But we think that the photograph on this page proves that glass blocks can look mighty attractive when properly used.



maintenance. The building

is owned by Art Metal Construction Company, Jamestown, N. Y. Architects: Free-

burg & Lindquist, A.I.A.,

Jamestown.



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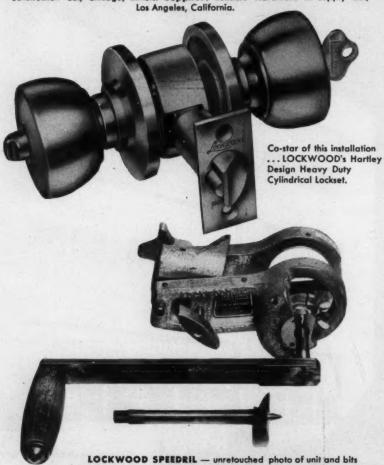
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RECENT PERIODICALS

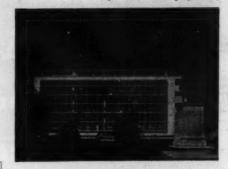
(Continued from page 326)

THE ARCHITECTS' JOURNAL, Jan. 20, 1955. In its "New Year Issue," the British weekly features "Buildings of the Year: 1954." J. M. Richards, the magazine's house editor, assesses the accomplishments of English architects during the year and observes these trends: the level of commercial design, particularly among office buildings, is "disappointingly low," although stores

"are less dreary and tasteless"; schools "maintained the standards of thoughtful design they have been setting since the war"; "high-density housing schemes are of unusual interest" — particularly in London and in the new towns; and factory architecture, in the new towns, at any rate, shows "a remarkably high standard."

Taking a look at the possibilities for 1955, the author notes that the Government's discontinuation of licensing for new building should encourage public and commercial activity in construction, which has, since the war, been mostly confined to housing, schools and factories.

(Continued on page 334)



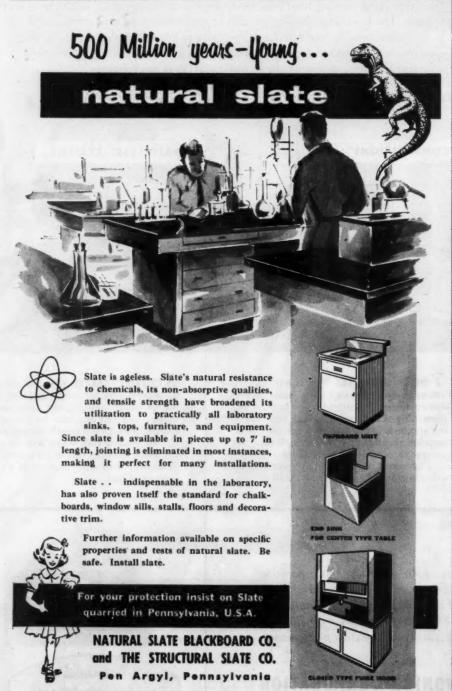
Above: department store in Broadgate, Coventry; architects Rolf Hellberg and Maurice Harris. "It handles a contemporary idiom in a workmanlike way and takes its place impressively but not too aggressively. . . ." Below: school at Hunstanton; architects Alison and Peter Smithson. "It is by no means the year's best school, being a hard, doctrinaire building, but it has been of great value in preventing other school architects from getting smug"





Above: flats in Paddington; architects Tecton, Drake and Lasdun. "Multi-story flats have gone much further towards resolving the esthetic problems the repetition of identical elements sets them." Below: Brixton Bus Garage; architects Adie, Button and Partners. "Another type of industrial building that has produced plenty of good design lately. . . ."





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Detroit University Day School Grosse Pointe Woods, Mich.

Fairmont Hotel Ballroom San Francisco, Calif.

Ford Motor Company, Styling Center

Dearborn, Mich.

General Motors Styling Studios & Shop Gen. Motors Tech. Center, Warren, Mich.

International Business Machines Corp. Kingston, N. Y. Jewish Community Center Milwaukee, Wisc.

Ketchikan High School Ketchikan, Alaska

Geo. B. Logan School Kansas City, Mo.

National Biscuit Company Pretzel Plant Chicago, III.

National Broadcasting Co. Los Angeles, Calif.

New Jersey State Teachers College Jersey City, N. J.

Philadelphia Bulletin Philadelphia, Pa.

Sawyer Biscuit Company Melrose Park, III.

St. Bernard High School New Orleans, La.

Winn-Lovett Bakery Miami, Fla.



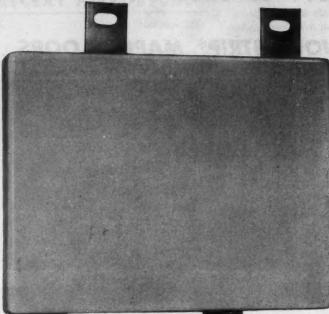
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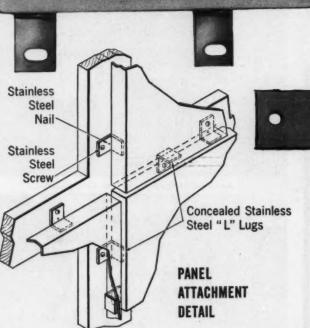
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Safeguard Porcelain Enameled Curtain Walls with <u>Stainless</u> Steel Fasteners



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It pays to specify fasteners made of Armco Stainless Steel for anchoring your porcelain enameled architectural panels. This protects the vital link between panel and frame. Stainless steel clips, screws, nuts, bolts and other fasteners are available in the same types and sizes as plain and plated steel.

Armco Stainless fasteners offer these advantages: They don't rust or "freeze," and their high melting point provides utmost safety.

Enameler Provides Details

A wide variety of panel fastening systems are used by producers of architectural porcelain enamel. When asking for competitive bids, the architect need only specify design, color scheme and stainless steel fasteners. The producer of architectural porcelain enamel will provide detailed lay-out of panels, method of attachment and location of furring strips.

Curtain Walls Too

Besides tailor-made porcelain enameled panels for facing buildings there are porcelainenamel-faced curtain walls for new industrial, office and school buildings. These light, insulated panels, only a few inches thick, take the place of several feet of masonry wall—save hundreds of feet of usable floor space.

Write for Names of Enamelers

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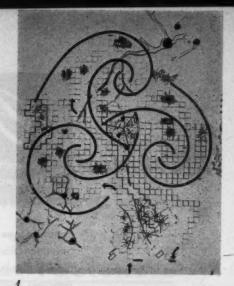
WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

RECENT PERIODICALS

(Continued from page 330)

DOMUS, November 1954. Dedicating the entire issue to a review of Milan's tenth Triennale, the lead article in the Italian monthly describes the building which seems to have stolen the show—the children's labyrinth (see cut 1) designed by Belgiojoso, Peresutti and Rogers, and decorated with a Saul Steinberg mural and an Alexander Calder mobile. The remaining pages review countries represented at Milan.

AUJOURD'HUI, Numero 1. Subtitled "Art et Architecture," this is a new bimonthly issued by the publishers of L'Architecture d'Aujourd'hui. This issue (see cut 2) contains sections on art, "Art, Science and Technique" (in this case, aerial photography), architecture (a 16-page section containing examples of South American, U. S. and Japanese building), furniture, "Forms in Movement" (here airplanes and automobiles); and a review of the Milan Triennale. Offices are at 5 rue Bartholdi, Boulognesur-Seine, Seine, France.



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ARCHITECTURAL DESIGN, January 1955. The British journal reports a French suggestion for sheltering men on three projected French Antarctic expeditions to be held in 1956-57-58. The design (see cut 3) calls for prefabricated light metal units, with which 10 men can enclose 100 sq meters in five days. The circular form was selected for ease of standardization. The metal envelope can be treated to reduce the build-up of static electricity caused by windblown snow and ice. The base will be painted orange, traditional French camping color. The design and research was carried out by a team of French architects, engineers and "consultants" under the coordination of V. Bodiansky.



(More news on page 338)

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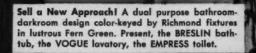
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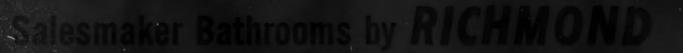


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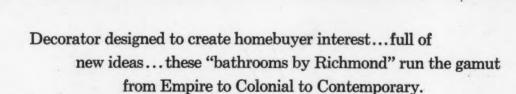


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Sell with Charmt The Bermuda Coral of the Richmond fixtures blends beautifully with warm wood tones. Featured: The COUNTESS lavatory, the EMPRESS toilet, the BRESLIN bathtub.

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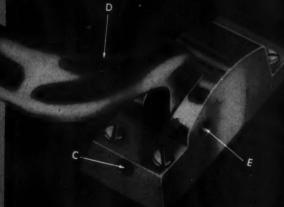
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THE RECORD REPORTS

(Continued from page 334)

N. Y. VETERINARY COLLEGE GETS 19 NEW BUILDINGS

A new 14-acre campus has been planned for the New York State Veterinary College at Cornell University in Ithaca, N. Y. The 19 new buildings, designed by New York architect Isadore Rosenfield, will include two basic science buildings, an auditorium, clinic build-



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ing, surgery and medicine building, physiology and anatomy barn and four surgery barns. Other facilities to be built are a mastitis barn, a bull barn, dairy barn, central feed and bedding storage building, garage and farriery and a two-family house for the caretaker and the groom.

Basic Sciences Building

The main basic science building will be a three-story structure, with the auditorium to the west of it and a library wing to the south. This building will house offices, operating, autopsy and animal recovery rooms, seminar and conference rooms, and various laboratories. On the third floor will be located animal quarters, a sterilizing room and other laboratories.

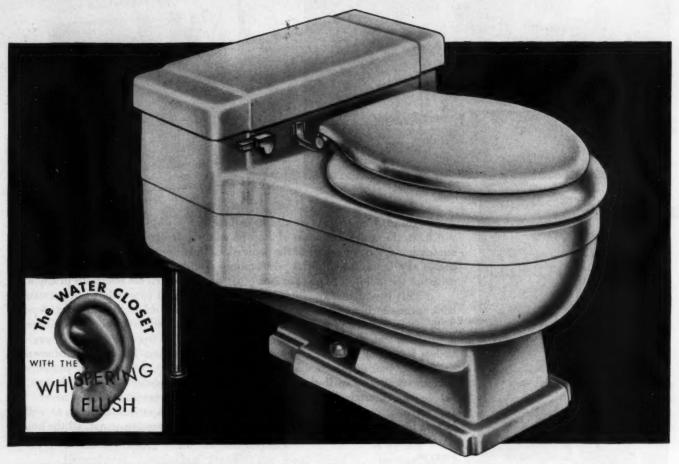
The smaller basic sciences building, to the north of the central building, provides a pathology museum and a medical artist's room, as well as surgery, dissecting and embalming rooms and animal pens. A research laboratory, a ruminant physiology laboratory and an optical laboratory will also be located in this building.

To the south of the main building lies the clinic building, which will house facilities for a small animal hospital. The surgery and medicine building, which is attached to the clinic, is also connected by a breezeway to five barns: physiology and anatomy barn and four surgery barns. The caretaker's house lies to the southeast of the site (not visible in the rendering) along with some live-stock paddocks.

Materials used for the main buildings will be a combination of red and buffgray brick, with bluestone trim, while the barns are to be of concrete blocks trimmed with bluestone. The two-family house will be built of red brick and vertical wood siding.

(More news on page 370)

WATER WORRIES BANISHED | NON-OVERFLOW WATER CLOSET HAS WHISPERING FLUSH!



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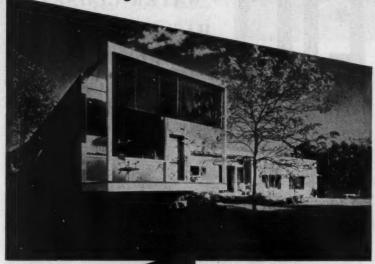
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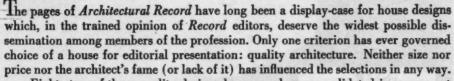
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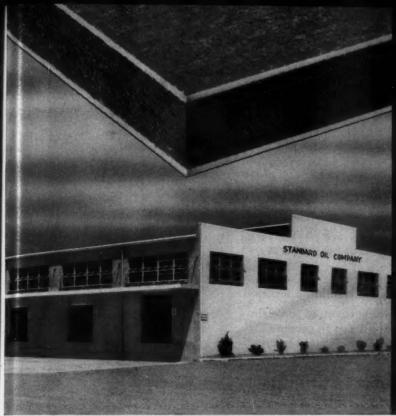
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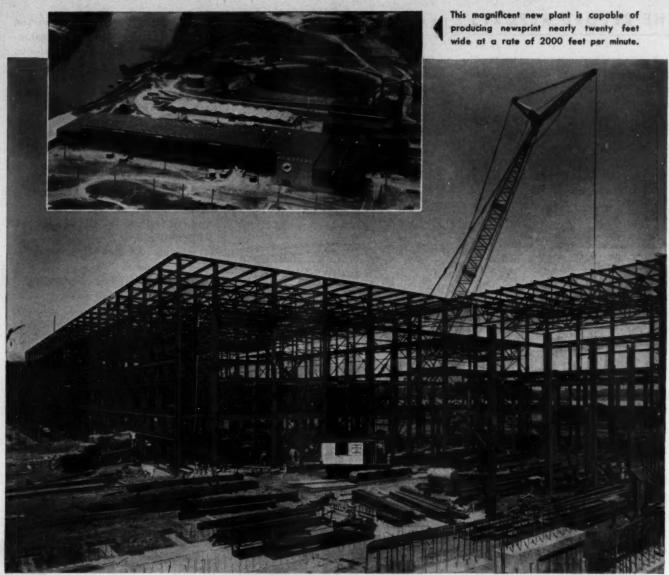
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Main building shown at the completion of steelwork. Engineer for the project was J. E. Sirrine Co., Greenville, S. C., aided by Celli-Flynn of McKeesport, Pa., consulting architects. Construction was a joint venture of Turner Construction Co. and Fraser, Brace & Co.

Titan in Tennessee

The giant mill shown above is Bowaters Southern Paper Corporation's newsprint plant on the Hiwassee River at Calhoun, about 40 miles northeast of Chattanooga. Put into operation in mid-1954, the Britishowned plant was designed to produce 130,000 tons of newsprint and 55,000 tons of kraft pulp per year.

Dominating the plant is the huge main building. Over 1000 feet long and covering 5½ acres, it includes a pulp-drying and machine room, a storage-and-shipping bay, a bleaching plant, a stock-preparation room, a grinder room, and shop and stores facilities. Nearby stands the power

house which contains four boilers and two 10,000-kw turbo-generators. The third structure serves as a pumping station and filtration plant.

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These three buildings required over 7500 tons of structural steel, fabricated by Bethlehem at our shops in Rankin and Leetsdale, both in western Pennsylvania.

Shop connections were riveted. However, all field joints were bolted. Out of the 196,635 bolts used, 170,203 were high-strength bolts meeting ASTM A-325. The remain-

der were common machine bolts.

High-strength structural bolting, a technique pioneered by Bethlehem, assured tighter joints than field-driven rivets. In addition, fewer men and less equipment were required, and the job was materially speeded. Thanks to bolting, and to meticulous job planning, Bethlehem crews completed erection in only 20 weeks.

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THE RECORD REPORTS

attempting to work out a new plan based on individual need to replace the old concept of a single set of criteria applicable in all situations.

The previous idea has been that new defense facilities should not be located less than 10 miles from the perimeters of certain designated target areas of industrial and population concentrations—a standard obviously outmoded by the H-bomb.

WASHINGTON (Cont. from page 38)

ODM Director Arthur Fleming has told Congress that a mileage yardstick conforming to the increases in weapons capabilities could not now be applied in any practical manner to all situations in all parts of the country and therefore a revision of the dispersion policy is in order. The new approach will take into account special local problems of cities and states.

The new attempt at policy revision

will try to look ahead at least 10 years on bomb potentials, extent of dispersal required, transportation facilities, etc. Pending formulation of new rules, ODM is advising any industry planning new facilities to get as far away as possible from target areas.

Inter-Agency Coordination

The President also has approved a request from Mr. Peterson for the creation of an inter-agency board for coordination of civil defense activities in Federal agencies. The panel will be known as the Civil Defense Coordinating Board.

Included will be top-ranking officials representing the Departments of Defense, Commerce, Treasury, Health, Education and Welfare, Interior, Agriculture, the Post Office and Justice, as well as the Office of Defense Mobilization, Federal Power Commission, Veterans Administration, and General Services Administration.

HOOVER GROUP WOULD END MANY LENDING PROGRAMS

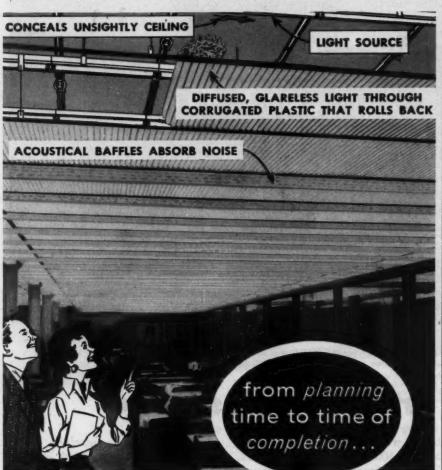
The fourth of some 20 reports being prepared for submission to the Congress by the (Hoover) Commission on Reorganization of the Executive Branch of the Government advocated sharp curtailment or return to private hands of a large number of the Federal Government's lending services.

Among the Hoover group recommendations:

- 1. Reorganization of the mortgage loan insurance program of the Federal Housing Administration to obtain its financing from private sources, subject to Federal regulation.
- 2. Authorization for the President to raise down-payment requirements for FHA-insured home loans.
- 3. Abolition of the college housing loan program administered by the Housing and Home Finance Agency.
- 4. Abolition of advance-planning loans to aid cities in establishing a reserve "shelf" of public works, also administered by HHFA.
- 5. Repeal of the authorization of HHFA to lend money for public works "except as they are necessary for public housing."

The Commission also recommended that studies be made of prospective foreclosure and loss experience of all phases of the government's housing programs; and that, with a view to assuring better appraisal and cost estimates, securing

(Continued on page 348)



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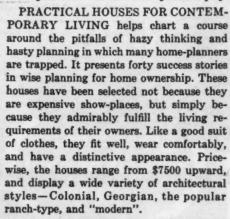
How to Help Your Clients Plan

PRACTICAL HOUSES for CONTEMPORARY LIVING

by Jean and Don Graf



• Here, for the first time, is a book especially written to help eliminate much of the indecision and confusion on the part of clients. Too often a client seems to be working at cross purposes with his architect, and invariably it's because he has ignored the three cardinal rules of home planning: Know what you want—Know what you need—Know what you can pay.

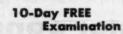


Jean and Don Graf, the authors, let you explore these forty houses inside and out,

and give you capsule case-histories of the thinking and planning that preceded building. They show how each house took shape from dream to reality (and how it sometimes changed shape when the site wasn't quite right, or desired materials couldn't be had, or costs were too steep). Every house is exhibited in four or more pages of photographs, floor plans of uniform scale, with brief text which points up useful ideas adaptable to the client's particular needs and desires.

The book is divided into six main sections, to conform with basic types of dwellings that meet virtually all shelter requirements: Houses for One Person; Good Small Houses (for the budgeteers); Houses Planned for Children and Adults; Houses for Limited Lot Lines; Houses for Irregular Land; and They Knew What They Wanted (houses where money

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THE RECORD REPORTS | On Asphalts

WASHINGTON

(Continued from page 344)

more substantial and continued owners' interest in maintenance, and eliminating windfalls, the whole organization of the apartment house program be further tightened up and full advantage taken of "the commendable provisions of the Housing Act of 1954."

The Commission would have HHFA use its Federal grants-in-aid to provide security for private loans to slum clearance projects and would terminate the lending and guaranteeing functions of HHFA. It suggested that either the name Public Housing Administration be changed to "Federal Slum Clearance Administration" or that the name of the Federal Housing Administration be changed to "Federal Mortgage Insurance Administration."

It is also urged that liquidation of the prefabricated housing lending program and the Alaska housing loans be accelerated.

COUNT \$27.7 MILLION IN "PLANNED" PUBLIC WORKS

The Census Bureau reported last month on its survey of "planned" public works of state and local governments: it found a total of 71,639 public works projects of some 4000 state and local governments having an estimated cost of \$27,710 million.

This work was planned by the various governments as of Oct. 1, 1954 and does not include work scheduled to start before June 30, 1955, or state and local projects for which Federal aid has been approved. Thus, it is felt, the projects counted constitute a true "reserve shelf" of planned public works.

All are not in the ready-to-go category, however. The Census Bureau found, in fact, that only 5620 jobs have their plans and specifications finished, land obtained and funds on hand or arranged for. Work on these could be undertaken, or bids advertised, within a matter of weeks. Construction cost of these was estimated at \$1814 million; land cost at \$169 million.

States and cities reported 17,215 "planned" projects—those with partially completed plans which could be brought to a "ready" status within six (Continued on page 352)

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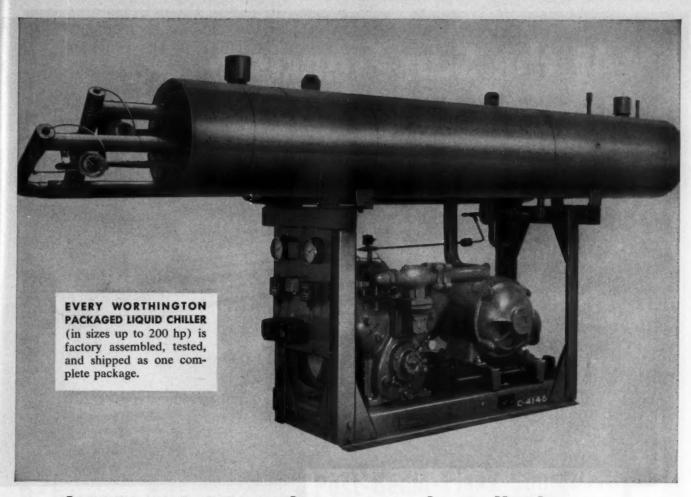
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BOX 5756-C, BETHESDA, MD.

THE RECORD REPORTS

WASHINGTON

(Continued from page 348)

months. Here construction cost totaled \$5759 million; land cost \$431 million.

Most of the jobs fell in the "programmed" category. These, 48,804 of them, are included and classified in a master plan or capital budget for which preliminary cost estimates and tentative descriptions only are available. Construction cost, \$17,776 million; land \$1761 million.

Significantly, half the governments reporting planned projects said they lacked funds to complete the planning process. One fourth lacked authority to complete the planning job. In the entire "programmed projects" category, almost four fifths of the governments said plans could not be completed for lack of funds, and 46 per cent lacked authority.

The Census Bureau survey covered all 48 state governments and the largest local governments of each type. The survey was conducted at the request of the President's Council of Economic Advisers and the Housing and Home Finance Agency.

The government units surveyed were said to have accounted for a substantial portion of all construction activity undertaken by state and local governments according to 1953 figures.

HILL-BURTON FUNDS KEEP '55 LEVEL IN HOUSE BILL

The first fiscal 1956 appropriation bill to clear the House of Representatives cut by nearly one fourth the Administration's request for Hill-Burton hospital construction funds.

The full House followed its committee recommendations in reducing the asked-for \$125 million to \$96 million, the same amount voted for 1955. Also as in this year's funds, \$75 million was earmarked for regular Hill-Burton construction, the other \$21 million for the new types of facilities added to the legislation last year — diagnostic or treatment centers, chronic illness facilities, rehabilitation buildings, and nursing homes.

The same measure (Departments of Labor-Health, Education, and Welfare) also carried \$24 million to aid states in construction of schools in "Federally-impacted" areas. These are locations

(Continued on page 358)

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For full information refer to our complete Catalog in SWEET'S FILE 218

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Photograph courtesy Mastic Tile Corporation of America, Joliet, Ill., Long Beach, Calif., Newburgh, N.Y.

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STYLING: There is an unusually wide selection of colors and patterns to satisfy client's wishes.

BEAUTY: From pastels to deep tones, colors are bright and stay bright ... because of luster-enhancing transparent resins and exceptional cleanability.

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nature of flooring made of BAKELITE Brand Vinyl Resins. Naturally, therefore, cleaning is very easy.

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BEAUTIFUL HOUSES 400

A Treasury of CONTEMPORARY HOUSES

by the editors of Architectural Record

Here, depicted in truly superb photographs and detailed drawings, are fifty houses that meet the most exacting demands of quality architecture. Chosen for publication from among hundreds of candidates, these houses are tributes to their creators and sources of genuine pride and delight to their owners. Most of them are illustrated in at least ten fine photographs of interiors and exteriors, plus skilled drawings of floor plans, plot plans, and intriguing details of design. Explanatory text tells the story of each house, what its owners wanted, and how the architect met and solved the problems confronting him. Here indeed is a treasury of houses rich in ideas and inspiration from the planning boards of some of America's foremost architects and designers.

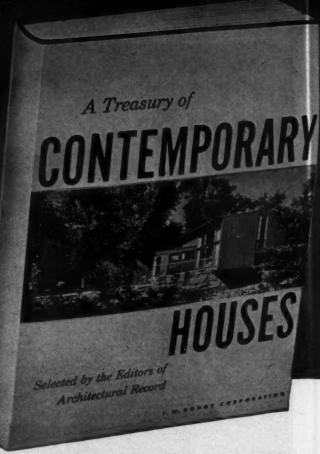
220 Pages • 8¾ x 11% • Over 600 Illustrations • \$5.95

To convey the spirit of this book we herewith reprint in its entirety the introduction written by Emerson Goble, managing editor of Architectural Record:

"House design today is in a state of delightful confusion. Confusion because ideas seem to change so rapidly, or maybe because there are so many ideas, so many new things to work with. Delightful because we want our houses to be delightful. You might even say that delight is the current fashion.

"Our forefathers—unnumbered generations of them—might laugh at the idea of delight being a current fashion. The age-old summary of architecture speaks of 'commodity, firmness and delight.' But it is still true that architecture has newly discovered the word, or at least has new visions of its realization.

"It is important to realize that this represents a step forward, not backward. When contemporary architecture, many years ago, began



sweeping out the sentimental litter of by-gone styles, it was going forward. It was recognizing that ancient styles, beautiful as they were in their day, were anachronisms in our time. They were merely stage settings. They did not satisfy our intellect, and if they satisfied our emotions, weren't we a little mixed up?

"So architects set about developing an architecture that would satisfy our sharpened intellects. They began developing new forms, new materials and techniques, new esthetics, new combinations of space, new ways to design houses for their purposes.

"What's new is not the negation of all that. It is rather the conscious effort to use it all for the delight of man's soul. It's as simple as that.

"A noteworthy result is variety. And what could be more delightful in house design than variety? Why should a modern house have to have a flat roof? Or a glass wall? Or an open kitchen? Why should it have to have its structure exposed? Why shouldn't it have anything its owners really want, including a curve or two, even a Victorian curve?

"Well, that's where modern architecture is today. That is why, incidentally, there is much variety in the houses in this book. All are modern. All were considered good enough to publish in ARCHITECTURAL RECORD. All are very recent selections. But not all take their academic theory in the same doses. What's more to the point, all have ideas in them, and nowadays there is no dogma, intellectual or otherwise, against using whatever ideas may appeal to you."

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heat, warm sunlight entering a room, or cold winds striking the house.

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DODGE REPORTS

The Construction News Division of F. W. DODGE CORPORATION 119 West 40th Street, New York 18, N.Y. Preview by Monsanto

How melamine* laminated plastics can play-proof a playroom



The most versatile and decorative of plastics is coming out of the kitchen where it has been very much at home for years. Colorful laminates made with melamine resins are now contributing beauty and utility throughout the house.

This sketch of a children's playroom suggests just a few of the practical new applications for this smooth, durable surfacing material.

The "hobby window" has a melamine laminated sill. It won't be harmed by water splashing from the aquarium or plants.

The dado, closet doors and drawing table are covered with melamine that can take hard wear and is easy to clean. The built-in drawing board provides a richly-huedsurface from which chalk and crayon marks erase with a damp cloth. The train table, toy chest and stools are also topped with melamine laminate. That means they're resistant to scratching and chipping.

Melamine laminates* in scores of colors and patterns are carried at most building supply stores. The lightweight sheets, from 1/16" to 1/10" thick, cut neatly with a saw and are cemented permanently to any rigid surface. They are also available already glued to plywood or hard board. Melamine laminates do not swell or warp, are unaffected by ordinary acids and alkalis.

*Monsanto supplies melamine and phenolic resins for decorative laminates sold under these trade names:

Arborite • Consoweld • Decarlite • Farlite • Fiberesin Formica • Lamin-art • Micarta • Nevamar • Panelyte Pionite • Plastilight • Rallite • Richelain • Textolite



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- Outdoor lighting fixtures





THE RECORD REPORTS

WASHINGTON

(Continued from page 352)

where Federal activity of one sort or another has imposed undue burden on the local school systems.

Headed for the Senate, the measure also contained \$100,000 for the White House Conference on Education to be held in November and December, half the amount requested to supplement the \$900,000 voted last year.

HOUSING COUNCIL ADVICE ASKED AFTER LONG LAPSE

The long-dormant National Housing Council has been revived by Housing Administrator Albert M. Cole, who said his intention was to provide for close study of housing activity, particularly the heavy continuing volume of new single-family houses. Some observers feel this rising construction rate threatens the general economy with inflationary influences, but Mr. Cole will not admit to this. He says only that any subject generating so much public attention should be watched closely by the Federal agencies interested.

The NHC has had little to do since it was authorized by one of the early postwar housing laws. It operated during the Korean crisis in connection with Regulation X, setting limits on down payments, terms, etc. Other than that, it has scarcely convened.

Holding its first new meeting late in March, the Council was attended by important observers outside its membership: Treasury Secretary George M. Humphrey; Dr. Arthur Burns, chief economic adviser to the President, and Woodlief Thomas, Federal Reserve Board representative.

Also attending were Franklin G. Floete, Defense Department; Walter Williams, Commerce Department; Harvey Higley, Veterans Administrator; Secretary of Labor James P. Mitchell; and representatives from the Department of Agriculture, the Home Loan Bank Board, Public Housing Administration and Federal Housing Administration. Mr. Cole presided as chairman of the Council.

The group waited less than a week to hold its second session, attending with data gathered from the various agencies on the housing picture.

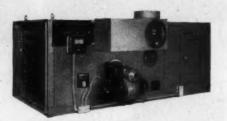
(Continued on page 362)

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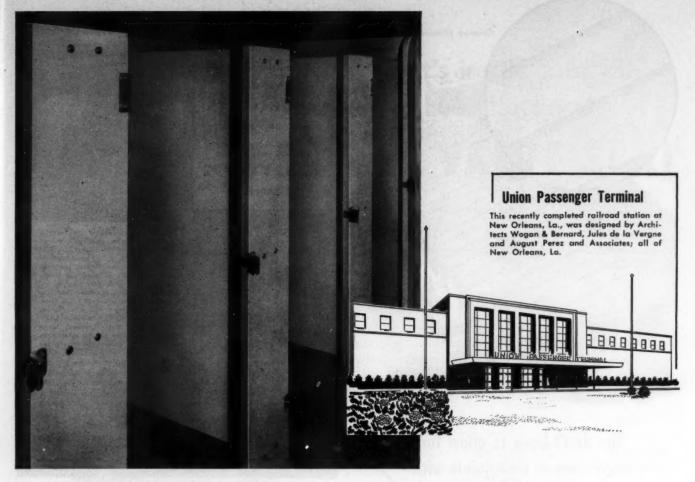
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Carrara Structural Glass is all pure glass with a smooth, even surface that is highly impervious to attack by steam, water, acids and cleaning compounds. Its gleaming finish, mechanically ground and polished to

a high degree of lustre, will retain its beauty indefinitely, through many years of service, countless cleanings. It cannot check, craze, stain or fade; it will not absorb odors.

Carrara Structural Glass is easy to clean and keep clean. An occasional wiping with a damp cloth keeps it fresh and sparkling. And since Carrara is made in large sections, there are fewer joint crevices to catch dust and dirt.

For more information about this versatile material—its unique beauty, its wide application possibilities, and its ten glowing colors—write Pittsburgh Plate Glass Company, Dept. 5225, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.



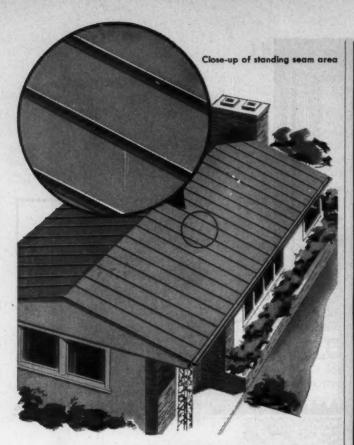
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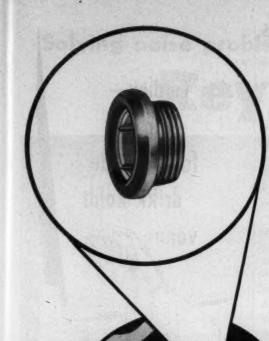
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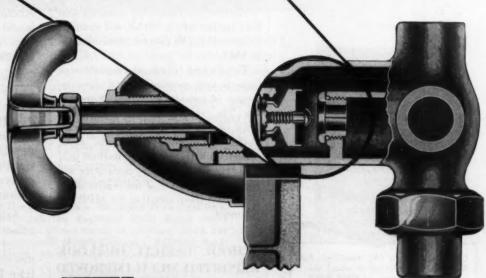
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THE RECORD REPORTS

WASHINGTON

(Continued from page 358)

BRAB WORKING FOR FHA ON GROUND SLAB STUDY

The Building Research Advisory Board has undertaken its first study on a technical question specifically allied to the field of housing. This is a fourmonth investigation of the slab-onground construction method. The new BRAB contract with Federal Housing Administration pioneers a better allaround understanding of field problems.

The new project stems from FHA Commissioner Mason's talks with industry leaders last fall. Those conferences brought up the limitations on technical knowledge in the housing field as they considered advisory services and revision of the MPR's. With the better known research activity of HHFA killed off by Congress, more emphasis on outside activity of this kind can be expected.

Under the contract with FHA, BRAB will do two things: 1) define and analyze the problems of slab construction in order to provide answers to problems wherever satisfactory information exists; 2) define problems requiring further research.

For two years an inter-departmental government committee has worked with FHA's technical division on problems of moisture movement in slabs. This committee recommended research and field studies which BRAB will examine before making its own recommendations to FHA.

The research board undertook its work immediately, moving toward the convening of consulting groups of specialists. The research will not overlap the work of the new FHA advisory committee on technical standards, being concerned with technical questions only while the FHA advisory committee will consider application of the results of the study and their adoption for MPR adjustment.

SCHOOL DEFICIT OUTLOOK REPORTED MUCH IMPROVED

The chances for new legislation this year supporting a greatly enlarged school construction program were watered down considerably when Mrs. Oveta Culp Hobby, Secretary of Health,

(Continued on page 366)



Architects and contractors the world over know that the client who demands the best requires Cordley drinking water coolers.

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Wherever noise problems exist ReynoCoustic aluminum acoustical system offers an efficient solution in attractive form...combined with minimum maintenance and ready access to utilities above the ceiling. Incombustible, high in light reflection and easily cleaned, the ReynoCoustic system also has high thermal insulation value.

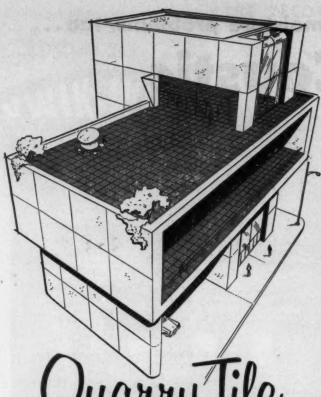
In addition, this YWCA natatorium at Charleston, West Virginia, demonstrates another advantage. These rustproof aluminum panels combined with glass fiber blankets, are unaffected by moisture, a common problem in acoustical treatments. The result is ideal for swimming pools and many other applications where high humidity conditions exist.

A complete installation service is available. For name of nearest franchised acoustical applicator, call the Reynolds office listed under "Building Materials" in classified phone books of principal cities. For complete literature write to Reynolds Metals Company, Building Products Division, 2020 South Ninth Street, Louisville 1, Kentucky.



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INCANDESCENT SQUARE RECESSED A square recessed incandescent downlight that can be recessed into a 12" opening in any type ceiling construction.

This new Curtis recessed unit is for use with either 150-W, 200-W or 300-W incandescent lamps. A specially designed lamp holder plate permits easy adaption for correct positioning of these three different wattage lamps. The hinged door accommodates either a variety of lenses or a louver. Units pass Underwriters approval when installed singly or when grouped or patterned together.

PRINCESS CORRIDOR LUMINAIRE A new completely enclosed Fluorescent Luminaire for 4' and 8' Rapid Start or Slimline lamps.

This completely enclosed luminaire is ideal for corridors and other areas where wide light distribution is desirable. The white plastic polystyrene plastic panels may be

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THE RECORD REPORTS

WASHINGTON

(Continued from page 362)

Education, and Welfare, told the House Education Committee that earlier estimates of classroom deficiencies by 1959–60 were no longer valid. The U. S. Office of Education (a HEW agency) dropped its deficiency figure from 312,000 classrooms to 176,000. The drastic change was based on new information reaching the Office of Education from state school officers in response to Phase II of the School Facilities Survey.

At 60,000 Classrooms a Year

The new figure assumes that the annual construction rate of 60,000 class-rooms will be continued during the next five years. If the need is to be satisfied entirely by that time, the rate will have to increase to around 90,000 to 95,000 units put in place per year.

Increased enrollments, population mobility, replacement of obsolete and otherwise unsatisfactory facilities, and reorganization of local school administrative and fiscal units are some of the factors going into the new calculations.

The Phase II study produced estimates from 34 states and three territories.

The need by 1959-60 remains at 476,000 classrooms, but the increasing rate of building promises to chew into this backlog requirement more quickly than the Office of Education had anticipated it would. In the last three years the annual construction rate has climbed from 50,000 units to 60,000. This was one fact that placed the earlier estimates in the wrong perspective. Also, it is probable that states have meanwhile found more buildings which they feel they can fix up and use, Mrs. Hobby said.

TO AID SCHOOL BONDS

REP. CARROLL D. KEARNS (R-Pa.) introduced a bill to encourage investment in school bonds. He said his plan might be the answer to the school construction problem. Text of the bill would amend present statutes to permit Federal Reserve member banks to deal in securities of regulated investment companies that invest solely in school bonds and other tax-exempt government obligations.

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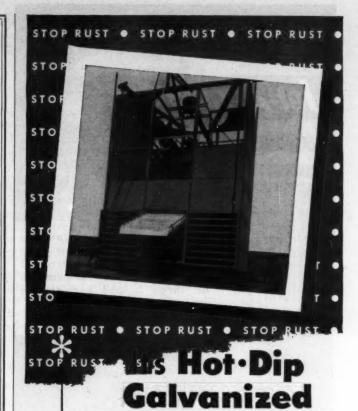
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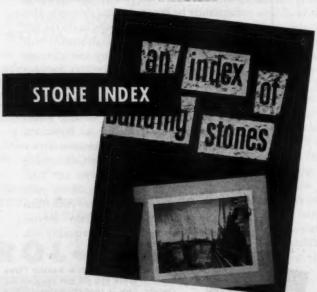


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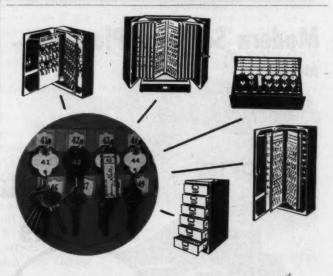


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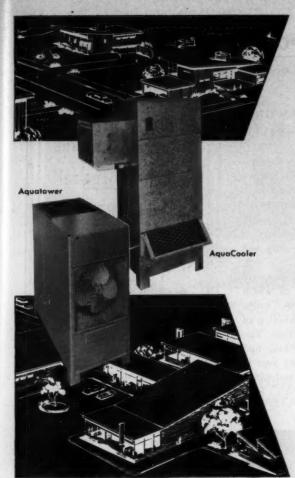
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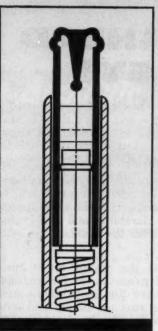
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THE RECORD REPORTS

(Continued from page 338)

ENGLISH CRAFTSMEN WORK TO REPAIR THE GUILDHALL

Badly damaged during the wartime bombings, the Guildhall, center of many of the City of London's ceremonies, is now being repaired and reconstructed. The building, which was gutted by fire, has lived through catastrophe before—the Great Fire of 1666 left only the walls standing.

Reconstruction of the paneling and the carved woodwork, some of which will conceal the burnt and scarred walls, is going forward under the direction of the Maple-Martyn Organization. The painted and gilded figures of Gog and Magog, which are carried every year in the Lord Mayor's Procession and which were also lost in the bombing, were sculptured by David Evans.



Above: the East End of Guildhall, where new oak paneling conceals damaged stone walls. Below: West End of the hall; oak screen, left undamaged is topped by the Public Gallery and Minstrels Gallery, guarded by "the last of the giants," Gog and Magog



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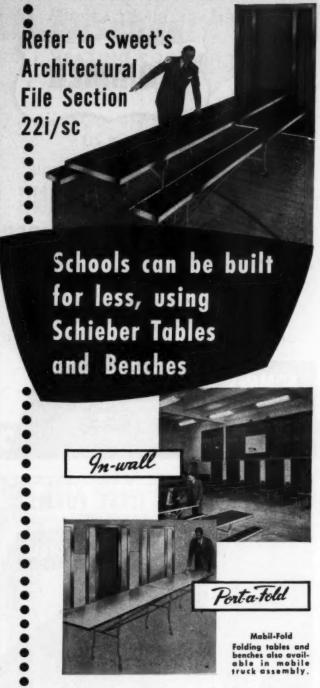
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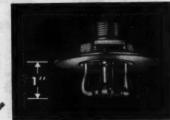
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REQUIRED READING

(Continued from page 48)

habilitation and conservation in operation or contemplated in ten cities, ranging in size from nearly 4 million to less than 100 thousand.

A Proposed Housing Ordinance Regulating Supplied Facilities, Maintenance and Occupancy of Dwellings and Dwelling Units. American Public Health Assoc., Committee on the Hygiene of Housing (New York) 1952.

City Fights Back, The. By Hal Burton. Urban Land Institute (1737 K St., N. W., Washington, D. C.) 1954. 318 pp, illus., \$5.00.

A nation-wide survey of what cities are doing to clear slums, keep pace with expansion, etc.

City of Man, The. By Christopher Tunnard. Charles Scribner's and Sons (New York) 1953. 424 pp, illus. \$8.50.

A plea for the beauty in city building.

Local Development and Enforcement of Housing Codes. HHFA, Div. of Research (Washington, D. C.) 1953. 55 pp.

Local Planning Administration. The International City Manager's Assoc. (1313 E. 60th St., Chicago) 1948. 337 pp, illus., maps, graphs, tables. \$7.50.

Tells the "how" of Planning Administration in detail.

Metropolis in the Making. Regional Plan Assoc., Inc. (205 E. 42nd St., New York) 1955. 88 pp, illus. \$2.00.

The prospects for the development of the N. Y. Metropolitan Region for the next 25 years.

Mill Creek Redevelopment Area Plan. Philadelphia City Planning Commission (Philadelphia, Pa.) 1954. 32 pp, illus.

Planning the Neighborhood. American Public Health Assoc. Public Administration Service (Chicago) 1948.

Principles for Planning a Comprehensive Program for Redevelopment. Chicago Planning Commission with Cooperation of the Housing & Redevelopment Coordinator (City Hall, Chicago) 1952. 19 pp.

Recommendations on Government Policies and Programs. U. S. Gov't Printing Office (Washington, D. C.) 1953. 377 pp.

A report on the President's Advisory Committee on Gov't Housing Policies and Programs.

(Continued on page 378)



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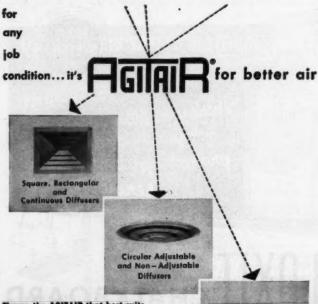


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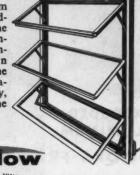
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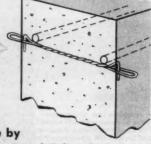


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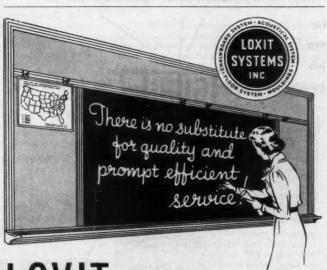
a new specification

In order to cooperate with a warning recently released by The A.I.A., the Marble Institute of America has issued a new marble specification for the protection of all architects, contractors and building owners who are interested in using imported marble. The specification reads:

> "All imported marble shall be selected from available stocks in this country, or, if imported, the marble shall be delivered in this country in rough form. All finishing, including selec-tion and jointing to size, polishing, cutting and carving, shall be executed in the United States."



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REQUIRED READING

(Continued from page 374)

Rehabilitation as a Business. Nat'l Assoc. of Real Estate Boards (1737 K St., N. W., Washington, D. C.) 1952. 99 pp.

Renewing Our Cities. By Miles L. Colean. Twentieth Century Fund (New York) 1953. 181 pp, illus.

Rethinking Urban Redevelopment. By Coleman Woodbury and Frederick A. Gutheim. Public Administration Service (Chicago) 1949. 26 pp.

Slum Prevention Through Conservation and Rehabilitation. By Jack M. Siegel and C. William Brooks. Advisory Committee on Gov't Housing Policies and Programs. (Washington, D. C.) 1953. 143 pp.

Towards New Towns for America. By Clarence S. Stein. Univ. Press of Liverpool (Liverpool, England). Distributed by the Public Administration Service, Chicago.

The Urban Pattern, City Planning and Design. By Arthur B. Gallion in collabora-tion with Simon Eisner. D. van Nostrand Co., Inc. (New York) 1950. 445 pp.

Covers the entire field of planning, dealing primarily with what planning is rather than the technical details of how to do it.

Urban Traffic: A Function of Land. By Roger B. Mitchell and Chester of Rapkin. Institute for Urban Land Use and Hous-ing Studies — Columbia University (New York) 1954. 226 pp, illus. \$5.

YEARBOOK 6

Architect's Year Book 6. Edited by Trevor Dannatt. Elek Books Ltd. (London, Eng-land) 1954. 260 pp, illus.

The sixth edition of a yearbook, which is not given to statistics and a list of names but rather to an evaluation embracing the entire scope of architecture by men prominent in their fields, contains a stimulating group of articles.

This edition includes a discoursive commentary by Maxwell Fry (who is on the editorial board of the Yearbook), an essay, "Harmony of Forms in Space and Time," by Giuseppe Vaccaro, an article on LeCorbusier as a painter, and a well illustrated article on the works of Nervi by G. C. Argan, as well as an article on the rarely-discussed subject of contemporary stained glass by John

In the town planning section, Paul Kriesis offers a critique on the origin of the plan-type common to most of England's post-war "Newtowns," illustrated with many planning maps.



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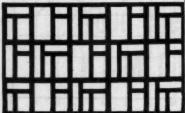
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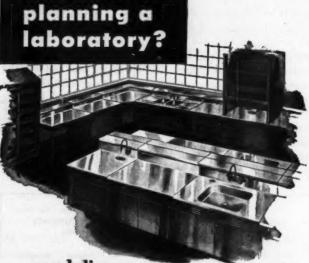
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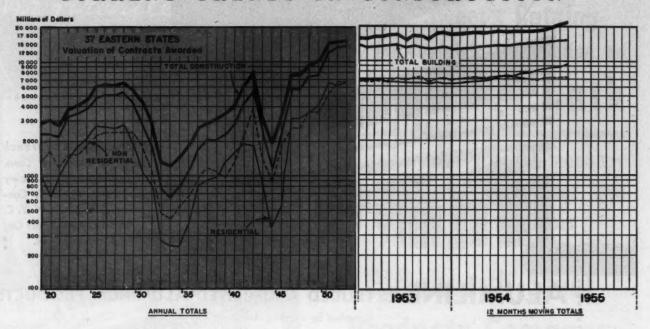
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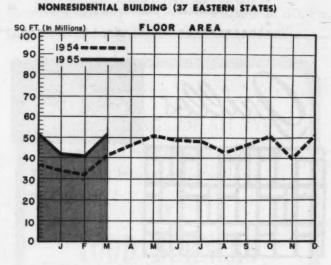
FIRST QUARTER OF 1955 AT NEW HIGH

THE LATEST REPORT FROM F. W. DODGE Corporation on construction contracts awarded in the 37 states east of the Rockies put the first quarter of 1955, with a total dollar volume of \$5,220,142,000, a cool 34 per cent ahead of the same period in 1954, the previous record first quarter of any year. Every one of the three basic Dodge categories contributed to the new record: nonresidential construction, at \$1,858,121,000, up 26 per cent; residential, at \$2,424,187,000, up 48 per cent; heavy engineering, at \$938,104,000, up 19 per cent. The dollar volume total of \$2,134,819,000 for March alone topped the equivalent figure for March 1954 by 40 per cent and was the biggest monthly total ever recorded by Dodge with the single exception of May 1951, whose total was swelled by huge atomic energy contracts. Dodge Vice Chairman Thomas S. Holden commented that "while current records are rather spectacular in comparison with those of the past, they do not appear to be out of line with the current needs of our fastgrowing economy."

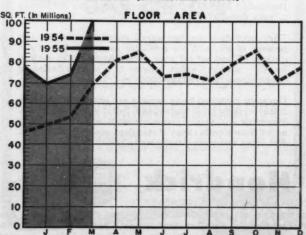
Source: F. W. Dodge Corporation
ONE-FAMILY DWELLINGS FOR OWNER OCCUPANCY*
Contracts Awarded—37 Eastern States
Floor Area (in thousands of sq ft)

	Annual	Monthly		Annual	Monthly	
Year	Total	Average	Year	Total	Average	
1932	35,971	2,998	1951	171,715	14,310	
1935	57,860	4,822	1952	154,873	12,906	
1943	1,082	90	1953	163,993	13,666	
1947	95,022	7,918	1954 1955—	176,831	14,736	
1950	211,727	17,644	. 3 mos.	35,865	11,955	
Year 19:	54—By Regio	ons				
New Eng	land	16,074	Southern /	Wichigan	. 11,217	
Metro. N	lew York	13,508				
Upstate	New York	4,069	St. Louis		. 5,416	
Middle A	Atlantic	19,650	New Orle	ans	. 6,768	
Southeas	tern	21,963	Minneapo	lis	. 6,812	
Pittsburg	h	5,618	Kansas Ci	ly	. 6,613	
Clevelan	d	13,482				
Cincinna	h	8,265	37—state	s total	176,831	

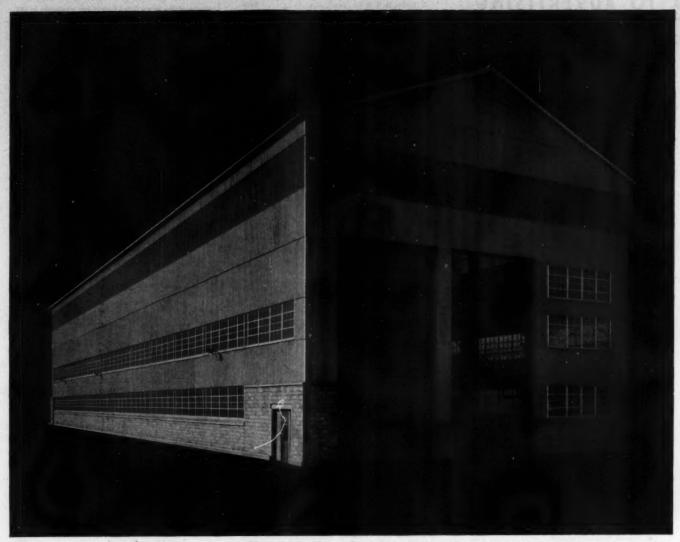
Charts by Dodge Statistical Research Service



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* Houses are the subject of Building Types Study No. 222, pages 155-186.



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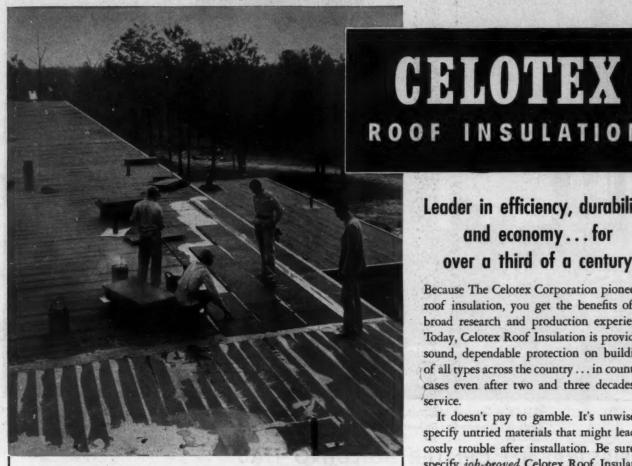
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Strong, light, easy to handle and cut. Low in cost. Made of tough, rigid cane fiber board. Extends 4" up from deck and 4" out from wall-size 5%" x 461/2". Cut-off right angle corner assures snug fit of roofing to wall, deck. Protected against dry rot and termite attack by exclusive Ferox® Process.

Only Celotex Roof Insulation Provides all these Important Features:

- 1. Resists Compression and Defies Rough Handling-So tough, loaded carts can be wheeled over it without damage.
- 2. Provides Excellent Bond-For hot mopped roofing felts of either asphalt or coal tar pitch type.
- 3. High Insulation Value-Reduces heating and air-conditioning costs, provides greater comfort the year 'round.
- 4. Low-Cost-Low initial cost, low applied cost, low maintenance cost.
- 5. Long Life-It is the only roof insulation made of tough, strong, interlocking Louisiana cane fibers, protected by the exclusive Ferox Process against dry rot and termite attack.
- 6. A Type for Every Job-Exclusive Channel-Seal, Preseal, Preseal "30", and regular.

It pays to specify genuine



ROOF INSULATION

THE CELOTEX CORPORATION . 120 S. LASALLE STREET . CHICAGO 3, ILLINOIS